S. HRG. 98-993

ROCKY MOUNTAIN LOW-LEVEL RADIOACTIVE WASTE COMPACT

HEARING

BEFORE THE

COMMITTEE ON THE JUDICIARY
UNITED STATES SENATE

NINETY-EIGHTH CONGRESS

SECOND SESSION

ON

S. 1991

A BILL TO GRANT THE CONSENT OF THE CONGRESS TO THE ROCKY MOUNTAIN LOW-LEVEL RADIOACTIVE WASTE COMPACT

Cheyenne, Wyoming

JANUARY 12, 1984

Serial No. J-98-89

Printed for the use of the Committee on the Judiciary

U.S. GOVERNMENT PRINTING OFFICE
33-340 O WASHINGTON: 1984

S521-68

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ROCKY MOUNTAIN LOW-LEVEL RADIOACTIVE WASTE COMPACT

THURSDAY, JANUARY 12, 1984

U.S. SENATE,
COMMITTEE ON THE JUDICIARY,
Cheyenne, Wyo.

The committee met, pursuant to notice, at 9:30 a.m., in Coachroom A and B of the Hitching Post Inn, Cheyenne, Wyo., Hon. Alan K. Simpson (acting chairman of the committee) presiding.

Staff present: James Curtiss, associate counsel to the Senate Committee on Environment and Public Works.

OPENING STATEMENT OF SENATOR ALAN K. SIMPSON

Senator SIMPSON. Good morning, ladies and gentlemen, and good morning, Ed, Governor.

The Committee on the Judiciary meets here today in Cheyenne to consider an issue that is of considerable importance. The issue of low-level radioactive waste disposal. It is difficult to hold a hearing when you can't hear. I just got out of a single-engine plane from Cody, and I hear reverberations of my voice, so hopefully I'm speaking what I think I'm speaking.

Well, 3 years ago, we passed the Low-Level Radioactive Waste Policy Act. That gave us the framework for the States and Federal Government to work together to address the issue of low-level waste disposal. And under this act, the States are, of course, authorized to use regional compacts for the purpose of providing for safe, effective, and efficient disposal of low-level waste disposal on a regional basis, with each region responsible for disposal of its own waste products.

And this act, together with the Nuclear Waste Policy Act, which I was pleased to have cosponsored that passed in 1983, set the groundwork for a comprehensive program of waste management in the nuclear field that is virtually unprecedented in its scope and should insure that each and every aspect of nuclear waste disposal, whether it be low or high level, will be performed in a safe and efficient manner. It took us a good many years to get to that point, as the Governor knows so well, too.

Well, I appreciate—and I followed—the sincere efforts of the Rocky Mountain region compact with great interest over the past 3 years, both in my role as a member of the Judiciary Committee, to which all interstate compacts are referred, and in my role as chairman of the Subcommittee on Nuclear Regulation.

And I am greatly pleased to see that the many diverse interests of the region have been reconciled by this compact. And I know of your very great efforts there, Ed. So, when the compact was submitted to Congress last year, I was more than pleased in response to the request of Governor Herschler and Governor Lammb of Colorado to be the sponsor of the legislation in the Senate granting consent to the Rocky Mountain compact.

This hearing is the next step in the process of obtaining Congress consent to this compact, consent that is required under the Low-Level Radioactive Waste Policy Act. And I do look forward to hearing the views of the many qualified witnesses who have agreed to testify here today.

I want to pay special thanks to those who have traveled from a distance to be here, and I thank you on behalf of both myself and the chairman of the full Judiciary Committee, Strom Thurmond, who authorized this hearing.

And I would note that we'll try to allow for time at the end of this hearing for any person in the audience who wishes to make a short statement, to do so, and in addition, those of you who wish to submit prepared statements for inclusion in the formal part of the hearing record are certainly invited to do so.

Before we begin with Governor Herschler, I wish to place the prepared statement of Chairman Strom Thurmond in the record.

[The prepared statement follows:]

PREPARED STATEMENT BY SENATOR STROM THURMOND, THE HITCHING POST INN, CHEYENNE, WYO., JANUARY 12, 1984

I am pleased that the Committee on the Judiciary is able to hold a field hearing today in Cheyenne, Wyoming, on the low-level waste compact most recently submitted to Congress for its consent. Senator Simpson, the able and distinguished Senator from this State, introduced S. 1991, consent legislation for the Rocky Mountain Compact, on October 21 of this year. I understand that similar legislation was recently introduced in the House of Representatives by Congressman Tim Wirth of Colorado.

The Rocky Mountain Compact is one of four compacts currently pending in Congress. Others which have been submitted for Congressional consent include the Southeast Compact, the Northwest Compact, and the Central Interstate Compact. In the two remaining regions, the Northeast and the Midwest compacts have been negotiated and ratified by several States, but have not yet been submitted to Congress. Today's hearing will complete the hearings on this subject anticipated by the Committee on the Judiciary for the near future. Hearings will now have been held on each of the pacts pending before the Congress, as well as an oversight hearing covering progress in all the regions.

Following completion of this hearing, I would like for the Committee on the Judiciary to consider the compacts as soon as practicable. The States, interested agencies, and committee staff have already been working on appropriate consent language for the various compacts. It is my understanding that the States are also working among themselves to resolve the issue of interim storage or disposal between January 1, 1986, and the date by which new disposal sites come on-line. Resolution by the States of the post-1986 disposal problem is one of the most important steps toward timely Congressional consent to the compacts.

I regret that I was unable to travel to the beautiful State of Wyoming to attend today's hearing. My good friend and distinguished colleague, Al Simpson, had graciously agreed to chair this hearing today; and I would like to express my appreciation to him for doing so. As a member of the Judiciary Committee, Chairman of the Nuclear Regulation Subcommittee of the Environment and Public Works Committee, and sponsor of S. 1991, Senator Simpson is undoubtedly the most appropriate person to chair a hearing on the Rocky Mountain Compact.

I would also like to thank all of the witnesses who have agreed to present testimony today. I am sure that their testimony will prove helpful to the Committee

in its consideration of the Rocky Mountain Compact. I would particularly like to thank Governor Herschler for taking the time from his busy schedule to appear before the Committee today.

Senator SIMPSON. Let me first introduce to you Jim Curtiss, the counsel and staff director of the Subcommittee on Nuclear Regulation of Environment and Public Works, the other committee I serve on. And Nancy Freudenthal of the Governor's staff, a very capable staff person in this area, I know, from firsthand experience from previous hearings.

So, Governor, why don't you proceed, and as I say, you and I have worked together on lots of stuff in 20 years, and I appreciate your kicking this one along. I appreciate having you here today. So, if you would proceed.

OPENING STATEMENT OF ED HERSCHLER, GOVERNOR, STATE OF WYOMING, ACCOMPANIED BY NANCY FREUDENTHAL

Governor HERSCHLER. Thank you very much, Senator. As you indicated, and for the record, my name is Ed Herschler. I am Governor of the State of Wyoming. On my right, Senator, I have brought with me Nancy Freudenthal of my staff, in case you have questions. She has been very active in this particular field, and I'm sure that she would be more qualified, if you will, to answer some of your technical questions that I anticipate at the conclusion of my presentation.

Wyoming is a party to the Rocky Mountain low-level radioactive waste compact, which of course, is the subject of this hearing today. In recent years, low-level radioactive waste has received national attention. From an individual State perspective, no State wants to be a dumping ground for the Nation's radioactive waste. In 1982, the three commercial disposal sites received close to 76,000 cubic meters of low-level waste, and about half of this waste was produced from nuclear powerplants.

New plants, and the decontamination and decommissioning of existing facilities will add to future waste volume. The remaining waste generally results from radioactive materials used for diagnostic procedures, therapeutic treatments, and biological experimentation.

Wyoming is in the enviable position of currently generating only a small amount of low-level waste, none of which is shipped to commercial disposal facilities. However, despite an occasional fantasy, we cannot sever our ties from the Nation. Our uranium is part of the national picture of the electrical production from the nuclear powerplants. Our university, medical facilities, and citizens benefit from the techniques and research using radioactive materials. Therefore, it is incumbent upon us to participate in the national solution.

This solution is embodied, of course, as you indicated in the Federal Low-Level Waste Policy Act of 1980, and this State gives the States the responsibility for disposal of commercial low-level waste generated within their borders, and encourages the establishment of interstate compacts as a regional approach to the problem. The compact under consideration, Senate file 1991, represents the Rocky Mountain States' approach to additional disposal capacity for our region's waste.

Before addressing the compact issues, I would like to thank you, Senator, for deciding to sponsor the consent legislation, and I would

also ask that you convey my gratitude to Senator Wallop for also agreeing to cosponsor the bill.

It is my hope that all Members of the Congress from the six eligible States will actively support the consent legislation. It certainly has not escaped my attention that we are in an important election year. In fact, when I ask you to sponsor the bill, Senator, I thought maybe you might want something to keep you busy while you run for election, if you will.

Senator SIMPSON. Thank you.

Governor HERSCHLER. On a serious note, I hope that Congress will stick with the 1986 date for excluding out-of-region waste, which is quickly approaching, we need a viable national program in place as soon as possible. And congressionally approved compacts will provide a foundation for this program.

From our past association, Senator, you certainly shouldn't expect me to give you a bill which has no problems. I admit that the Rocky Mountain compact raises some controversial issues. However, I believe that all questions and problems can be answered without interfering with or changing the compact's terms or intent.

As you well know, the compact not only represents substantive legislation in each of the compact States, but is also a binding contract among the States. As lawyers, we both know the effort of changes to either a contract or legislation. The contracting States and all State legislatures must start the process over, negotiating and enacting language consistent with the changes. And I would ask that you avoid this by resolving all ambiguities and problems through the following approach:

First, use the Congressional Record to clarify your intent in approving the compact. Legislative history has long been recognized as a necessary and useful reference in resolving ambiguities in status.

Second, if the issue seems more substantive and controversial, Congress can condition its approval on the basis of certain actions, or understandings. I believe that Colorado has drafted consent language which you might consider along this line.

This second approach would not require future negotiations, or legislative action. The compact, by its terms, is sufficiently flexible to accept conditions on its operation.

And finally, when Congress is grappling with the compact, I would ask that you focus on whether our language is equal, in effect, when compared with the Federal law, rather than whether it's identical in its terms.

As an example, you should consider whether our definition of low-level waste results in the same waste accepted for disposal as under the Federal definition, regardless of whether or not the words are identical.

The Federal language defines low-level radioactive waste based upon what it is not, rather than what it is. And this approach may be fine for the old wood carver who "whittles away at everything that ain't b'ar." But for us, we would prefer identifying the waste in some positive fashion, so that we know what we are accepting for disposal.

And I will now briefly address the issues you raised in your letter to me announcing this hearing. I have two documents for the committee, which should address your first two questions, and demonstrate

the region's positive efforts for siting an economically viable disposal site. I rather suspect that Colorado will discuss this issue to a greater detail. You should know, however, that we are working toward an interregional agreement with the northwest compact under which the Hanford, Wash., disposal site would accept our waste if our site is not fully operational by 1986. And a draft of that document is included in the package that I will give you today.

You next raise the question relating to the packaging and transportation of low-level waste. I certainly do not intend the compact to affect the existing Federal/State relationships in this area. The hazardous material regulations of the Department of Transportation establish the exclusive standards for waste containers while in transportation. States can, if they desire, inspect waste packaging on the premises of the NRC licensees through a 274(i) agreement. States can also inspect containers in the custody of carriers for compliance with the DOT standards, as long as precautions are taken to avoid unnecessary delays in transit. And finally, the State which hosts the disposal site can adopt container standards for the disposal of waste which are consistent with the DOT standards, even if the State standards are more stringent.

We are not looking at creating a patchwork system of mismatched requirements. This certainly would not promote safety or environmental benefits. However, I think we can have uniformity and consistency through cooperative efforts with NRC and DOT without any additional language in the compact.

Your next question concerns the need for additional coordination where the region includes nonagreement States. As you well know, Wyoming may never become an agreement State with the NRC. We can, however, deal with the inspection issue for waste packaging through a 274(i) agreement, without becoming a full agreement State. If Wyoming decides to host the disposal site, we would need to develop a very close relationship with NRC, and to insure that radiological hazards at the site are appropriately addressed.

And I would like to say that the site operator must also obtain a solid waste disposal license from our Department of Environmental Quality. This license would address the nonradiological environmental impacts from the site. Just as the compact does not disrupt existing Federal authority and responsibilities, it cannot and should not affect the applicability of State law.

On the Federal low-level waste issue, I believe our site can accept Federal nondefense related waste, but only under the same terms and conditions applicable to commercial low-level waste. Disposal fees should be paid and the waste should remain within the region from which it originated.

Your last question raises an issue which was the subject of a letter from me to Congressman Udall. And my response remains the same. With the abundance of Federal land holdings in the Western United States, the identification of candidate waste disposal sites will involve some Federal land management agency. Clear direction should be given to these agencies to assist State or local governments, if requested, in identifying suitable Federal land for a disposal site. Inasmuch as we are all trying to comply with Federal law, we would hope that Federal agencies should make this compliance as easy as possible.

Thank you very much, Senator, for considering my comments on the consent legislation for the Rocky Mountain Low-Level Radioactive Waste Compact. I will be happy to try to answer any questions or concerns that you might have on the compact or on its operation.

Senator SIMPSON. Thank you very much, Governor. I appreciate that. Very helpful to us. I noted in the testimony, and of course, know that Wyoming currently disposes of all of its own low-level waste within the State.

Governor HERSCHLER. That's correct, yes.

Senator SIMPSON. Do you think that this compact contains sufficient flexibility to allow existing and future generators in Wyoming to continue this practice?

Governor HERSCHLER. I suppose it would, Senator, but if we are able to establish the site, and I think Colorado has become the lead State, if you will, in locating a site within its borders, I would suspect that if we would prefer to cooperate with the members, the State members, and probably would prefer to use that site, I mean to establish it and to maintain it and work cooperatively within the other States within the region. If something should occur that we did not, I think we could probably continue the way we do, because the amount of our low-level radioactive waste is very small compared to other States.

LOCATING A DISPOSAL SITE

Senator SIMPSON. Yes, well, in speaking of those sites, Governor, could you just give us a brief comment on the progress that the Rocky Mountain region is making in locating a suitable site, and when that site might be in operation.

Governor HERSCHLER. I personally can't tell you that. Perhaps Nancy might answer that question, Senator.

Ms. FREUDENTHAL. Senator Simpson, Colorado is actively pursuing siting a disposal site. We are looking at possibly it not being fully operational by 1986. Colorado in anticipation of that is negotiating with Washington to continue to use the Hanford disposal site.

The documents that the Governor has indicated show that we believe the 5-year period which is normally discussed in developing a site can be significantly shortened by cooperation among all the agencies to get the permits done as expeditiously as possible.

I believe that the documents that the Governor has goes through, and in one chart has an actual timeframe for the site's start up.

Senator SIMPSON. Ed, in this testimony, you also mention—certainly we, both of us, having practiced law in this State, both of us having served on the Judiciary Committee of the Wyoming Legislature, too, I remember you were chairman. I served with you. You do recall that, don't you?

Governor HERSCHLER. Vaguely, yes, sir.

Senator SIMPSON. I do. And I recall, too, when we dealt with compacts often—what do you see as potential difficulties that the States might face if Congress were to amend this compact in any significant respect, thereby requiring the States to reratify the compact. What do you see there?

Governor HERSCHLER. Well, ordinarily, Senator, when the States get together and negotiate a contract, or a compact that is acceptable to all of the States, then the process is rather long and laborious; and then, of course, any major and significant amendments would require, again, legislative approval; which, of course, it's sometimes difficult to get legislative approval, and consequently, we would hope that there would not be material or substantive changes to the compact, so that we would not have to go through that process again.

And very often, our legislators get somewhat rebellious when someone decides that we haven't actually crossed the "t" or dotted the "i" in the proper place, and they may just take the position that we'll just not comply. Once you have the compact in place, our experience has been it's extremely difficult to renegotiate and acquire suitable language from all of the affected States, plus the legislators.

And so we would hope that you could, by particularly through the use of the Congressional Record, show what the intent of Congress is, so that we may not be getting into all of the nitpicking that someone might decide on somewhere down the line.

And specifically, also, if we've to renegotiate, it then delays the acquisition of the site and all the permitting that's necessary, so that's one of the considerations also, sir.

Senator SIMPSON. I held a hearing in Seattle on this issue, and I think we see movement there that's heartening, but unfortunately, the rest of the Nation doesn't progress along as rapidly with the compacts as this area. The major generating regions in the Northeast and Midwest have not been stimulating in their conduct of meeting this test. So, we're going to find the 1986 deadline coming and going. And very likely, without all the compacts having been ratified.

And then, of course, it's going to trigger that the compact regions with the operating sites will close their sites, leaving the other regions without a place to dispose of their low-level waste.

Would you support any kind of initiative by Congress to legislate conditions under which interim disposal capacity might be available to those States, or is that a matter that you think might be left up to the States to resolve?

Governor HERSCHLER. I would suspect, Senator, that—I think that's an awfully difficult question to answer. One of the things or one of the reasons why the States involved in the Rocky Mountain compact got together in the first place was that we would hope that we would be able to dispose of our waste for those States without, say, having to accept a lot of waste from other areas that their compacts are not acceptable, or whatever it is, by that 1986 magic date. Certainly, if you were able to provide some mechanism that would permit those States that perhaps their compacts were not acceptable, to give them some latitude, so that if this one is acceptable and we're able to work it out, that we would not become the national dumping ground, if you will.

Senator SIMPSON. Well, there are several options that are going to hit us if we find a lot of States missing that deadline, and some of them are rather unpalatable, but certainly the interim disposal capacity is one that we should, I think, consider, and yet do that in a way which doesn't let them stall on too long.

Governor HERSCHLER. That would be one of the problems I would expect, that if we were to have our compact approved and were able to get a disposal site, there might not be much of an incentive for other States to proceed in a diligent manner to find a disposal site within a region, or within an area, if they thought the one, say, in Colorado were available to them. And I think that there ought to be some method established by Congress to be able to apply some pressure, if you will, in some form, and I have no idea what that would be, sir.

Senator SIMPSON. We have developed some of that with some of the later witnesses and testimony.

Well, just one final question, Ed. Of course, Wyoming is not an agreement State, an NRC agreement State, and I don't think that's been at all harmful to us. I think that's been rather to our benefit, because I have seen it from the scene in Washington. In most instances.

Do you think you will have sufficient flexibility and authority as a nonagreement State to enforce the terms of this compact, and the NRC packaging and transportation requirements?

Governor HERSCHLER. Yes, I think we do, Senator. First of all let me say even though we are not an agreement State, we have had a very good relationship with NRC. They have been extremely cooperative with us, and there are those who, to put it bluntly, within our State, sometimes are suspect of NRC, but that has not been the relationship between the State level and the national agency.

And consequently, we have not entered into an agreement, I suspect, because of some of the people involved who may have some suspicion, but we have gotten along fine; and with the cooperation we have had with NRC over the years, with the possible—like in the packaging where I think we could get a permit under that 274(i) agreement, I would not foresee any great problems with NRC.

Senator SIMPSON. Well, Governor, I appreciate that very much, and I really appreciate your being available for this, and always enjoy working with you on things that have to do with the State, and enjoy that spirit with your office. And I thank you.

Governor HERSCHLER. Thank you very much, Senator. Once again, I want to express my thanks and gratitude for your willingness to be a sponsor of this legislation, along with Senator Wallop. It's always nice to have you here. I suspect I will see much more of you this summer.

Senator SIMPSON. I hunch you may, I guess. That's true.

Governor HERSCHLER. Thank you very much.

Senator SIMPSON. Thanks, Ed. Thank you, Nancy, too.

Well, we will now have the next witness, Leonard Slosky, executive director of the Rocky Mountain low-level radioactive waste board, please proceed. Nice to have you here.

STATEMENT OF LEONARD C. SLOSKY, EXECUTIVE DIRECTOR OF THE ROCKY MOUNTAIN LOW-LEVEL RADIOACTIVE WASTE COMPACT BOARD

Mr. SLOSKY. Thank you, Senator Simpson. My name is Leonard Slosky, I am the executive director of the Rocky Mountain Compact Board. I appreciate the opportunity to talk with you about the compact today.

As you note, the compact has been adopted by the States of Colorado, Nevada, New Mexico, and Wyoming. Arizona and Utah have not adopted the compact but remain eligible to do so. The compact has been introduced in both Houses of Congress, and the board is very greatful for your sponsorship of this legislation.

I will move to directly address the questions posed by the committee, which I will paraphrase.

One, what steps are being taken to insure of the timely development of a new disposal facility?

As Colorado generates 90 percent of the waste of the four States which are currently members of the Rocky Mountain compact, Colorado is the only State which has an obligation to develop a facility under the compact.

When Colorado adopted the compact into law, the State recognized this responsibility, and included legislation which established a process for siting facilities. In this process, Colorado counties were provided the initial opportunity to volunteer areas for a disposal site. To the amazement of many, a county in Colorado has responded positively to the siting of the facility in its county. Although the site initially identified by a private firm in Montrose County has been dropped from consideration because of technical shortcomings, Montrose County is expected to recommend several other sites for development of the regional facility in the near future.

In the event there is no facility approved by January 1, 1985, the Colorado Department of Health would develop a plan for State owned and operated facility for approval by the Colorado Legislature. It appears very unlikely that a new facility will be operational by the January 1, 1986, exclusionary date.

However, if no major obstacles arise, I estimate that the Rocky Mountain facility will be operational sometime in 1987. As an agreement State under the Nuclear Regulatory Commission (NRC), Colorado is proceeding to adopt regulations for the licensing of a low-level radioactive waste disposal facility.

In addition, with the assistance of the U.S. Department of Energy, the State is conducting studies and other planning to facilitate and expedite the citing of a new facility. However, this progress can continue only under a congressionally ratified compact. If Congress delays in its consent to the compact, Colorado may be forced to suspend its siting activities, since its exclusionary authority will be uncertain.

Two, can a disposal site for the small amount of waste in the Rocky Mountain region be economically operated?

We have recently published a study which Governor Herschler referred to which documents that such facility disposing of the Rocky Mountain region's small amount of waste can do so profitably, and in compliance with all health and safety requirements while charging disposal fees comparable to those of existent facilities.

Attached to my testimony is a summary of this study. In addition, this study did not consider two categories of large volume radioactive wastes, which could make the development of the facility in Colorado much more attractive to a private developer. These are the so-called Denver radium wastes consisting of over 3 million cubic feet of material, and the uranium mill tailings wastes.

Three, does the compact insure the uniform enforcement of packaging and transportation requirements? The Rocky Mountain compact does not alter the existing packaging and transportation regulatory framework. It does not authorize the establishment of packaging and transportation requirements by member States, or the compact board.

Originally, the NRC expressed concern that the compact could be interpreted to allow the member States of the board to impose packaging or transportation requirements, which could be inconsistent with Federal law. Because of this, on August 5, 1983, the board unanimously adopted resolution, No. 2, stating that this will not be done.

I have been informed this week that NRC would now like to have this assurance in the actual consent language rather than in the resolution. We see no problem with doing this and would have no problem with addressing the other NRC concerns explicitly through the consent language, if they so desire.

Four, does the membership of agreement and nonagreement States in the compact pose particular coordination problems? Since the compact does not alter the existing Federal/State regulatory framework, no greater coordination is necessary under the compact than is already the case. Under the compact, all health and safety regulatory authority continues to reside with individual States and/or the NRC. We do not anticipate any problems due to the fact that both agreement and nonagreement States are members. Because agreement State programs must be compatible with NRC regulations, the region believes that whether regulated by NRC or the States, public health and safety will be protected.

Five, what responsibility should the region have for the disposal of Federal waste? After lengthy discussions between all of the compact regions and a number of Federal agencies, it has been concluded that the regions should be responsible for the disposal of Federal low-level radioactive waste, except for Department of Energy defense waste. The regions will insist, however, that all Federal waste disposed of by regional facilities comply with the same requirements, taxes, and surcharges as non-Federal waste.

Due to the small quantity of non-Federal waste generated in the Rocky Mountain region, and the public sensitivity to Federal waste disposal, the Rocky Mountain board strongly requests that the region be provided with assurances, particularly from the Department of Defense, that Federal waste will not constitute a significant portion of the waste disposed of at regional facilities.

The board is anxious to enter into agreements with the Department of Defense and other significant Federal generators prescribing the

quantities of Federal waste which may be disposed of at Rocky Mountain regional facilities.

The compact board would find unacceptable a provision authorizing the disposal of Federal waste generated outside the region, in Rocky Mountain regional facilities without approval as provided in the compact.

Six, how should Congress address the concerns with the Rocky Mountain compact? I would like to echo the remarks of Governor Herschler this morning in stating the Federal interest in radioactive waste compacts should be to assure that a reasonable national system for the management of such waste is brought into effect, and to assure that Federal regulatory authorities are not inappropriately encroached upon.

We believe that certain clarifications to the Rocky Mountain Compact should be made. We have proposed consent language which we believe resolves the concerns raised by DOE, NRC, and DOT, as well as the numerous Federal agencies which generate low-level waste.

However, changes to the compact, which would require readoption by State legislators, can and should be avoided. Because of the specific authority which the State legislators have granted to the Rocky Mountain board, all of the issues which have been raised with this compact can and should be resolved through conditional consent language, which does not require subsequent action by State legislatures.

I would like to mention one additional congressional consent issue, the definition of low-level waste. The Rocky Mountain compact board recognizes the clear Federal interest in assuring compatible definitions of low-level waste in all compacts. However, there is no reason to force all regions to have identical word-for-word language.

The criterion for judging the compact definitions should be that they be equivalent in effect, that no waste be arbitrarily excluded from disposal of each of the facilities.

On August 5, 1983, the Rocky Mountain board voted unanimously to accept for disposal at regional facilities waste material containing transuranic elements not exceeding 100 nanocuries per gram. With the proposed consent language and the action of the compact board, Rocky Mountain regional facilities will accept the same low-level transuranic waste as currently defined by the NRC.

I would conclude by urging Congress to act expeditiously on the compacts. The progress which the Rocky Mountain States and a number of other regions have made will not continue if congressional consent is not forthcoming. Thank you. I will be happy to respond to questions.

Senator SIMPSON. Thank you very much, Mr. Slosky. In reviewing some of your testimony in previous hearings before Congress, you noted that the Rocky Mountain Compact would be agreeable to accepting low-level waste generated by the Department of Defense, but only if that waste is generated within the Rocky Mountain region. Under what circumstances, if any, would the compact be agreeable to accepting low-level waste generated by the Department of Defense in other regions; and more specifically, would it make sense to provide DOD with that kind of flexibility, if it were required for reasons of national security?

Mr. SLOSKY. Our strong preference would be not to be required to accept any waste from outside the region, whether it be from a Federal generator, such as the Defense Department, or commercial generators. We do not believe it's necessary to put into the compact or the consent language any special provisions for Federal waste disposal from outside the region. This is primarily because if there is a national emergency during which the Department of Defense would find itself without a disposal site in the region, they already have an agreement with the Department of Energy to use the Department of Energy's 14 sites so that to have another 4 or 5 commercial sites available, just doesn't seem necessary to us.

Senator SIMPSON. Let me ask you this: If the Congress were to require DOD to dispose of its low-level waste in the region in which it's generated, what region would then be responsible for taking the nuclear submarines after they have been decommissioned?

Mr. SLOSKY. I think our approach would be the one that currently exists, and whether it's submarine waste or other waste that may originate outside of the United States, it's currently considered to be the waste of the State in which it's admitted back into the United States, so where the naval facilities currently are where they receive those wastes, those sites are considered, in a sense, the generator of those wastes.

Senator SIMPSON. I was thinking of the actual structures themselves.

Mr. SLOSKY. Of the submarines itself?

Senator SIMPSON. That's right.

Mr. SLOSKY. That's an interesting question. I am not sure we have addressed that; my understanding is that the current plan of the Navy is not to dispose of the submarines themselves in these types of regional facilities.

Senator SIMPSON. Article 7 of the compact makes it unlawful for anyone to "collect, consolidate, store, treat, incinerate, or dispose" of low-level waste within the region after January 1986—the deadline we spoke of—unless this waste is generated within the region. Would this provision affect the ability of anyone to transport low-level waste through the Rocky Mountain region for disposal elsewhere?

Mr. SLOSKY. No, it would not.

Senator SIMPSON. Does the compact authorize the Rocky Mountain Compact Board, or individual States within the region, to establish packaging or transportation requirements, or licensing requirements for low-level waste?

Mr. SLOSKY. No; it doesn't.

Senator SIMPSON. Under article 3 of the compact, individual States are authorized to take "appropriate enforcement actions with respect to violations," a reference, I assume, to NRC and DOT requirements. Would a State be able to impose civil penalties on violators under this provision? Rather topical issue, isn't it?

Mr. SLOSKY. I would say they could not impose civil penalties unless they are already authorized to do so under Federal law or State law, which is consistent with the Federal law. You may be referring to the civil penalty provision in the compact. It is not our intent that the civil penalty provision apply to the enforcement of packaging and transportation standards. The civil penalty provision is specific to violations

of particular compact provisions such as moving waste into or out of the region without approval.

Senator SIMPSON. As I read that provision, penalties might be both compensatory and punitive in nature. What authority would either individual States or the compact board have to impose punitive civil penalties in the absence of that provision?

Mr. SLOSKY. For violations of what provisions?

Senator SIMPSON. Just violations of certain provisions of the compact.

Mr. SLOSKY. Our interpretation is that for violations of the compact itself, the only recourse is the specific civil penalties provisions in the compact. So that States on their own would not have authority to take legal sanctions against violators of the compact. The civil penalty provisions read specifically that the board may assess civil penalties, and it doesn't authorize the States individually to do that.

Senator SIMPSON. There may be some States—and we have heard testimony already, and we will hear more—that will be unable to meet the 1986 deadline. How, in your judgment, should the Congress address that matter? Are the States moving forward with discussions aimed at providing interim storage for those that miss the deadline? Is there some talking going on there about that?

Mr. SLOSKY. We are actively negotiating between the regions on how to handle the post 1986 problem. The view of all the regions at this point is that Congress should not explicitly deal with the problem. Congress should not put language in the consent language or enact a Federal statute to deal with that problem. It is our understanding that the compacts will not be ratified until we have a resolution of that problem.

Our approach is to negotiate between the States a resolution of this problem, bring the resolution to Congress, which hopefully would then allow the consent of the compacts to proceed.

Senator SIMPSON. In August of last year, the EPA announced its intention to promulgate a general environmental standard for low-level waste disposal sites. What are your views on the need for such a standard, and how will this EPA initiative affect the efforts underway in the Rocky Mountain region to proceed with the development of a suitable site?

Mr. SLOSKY. Our biggest concern is because the EPA standards did not precede the NRC standard as was supposed to be the case. The adoption of a new general environmental standard following the NRC standard at this point would serve to delay the siting and licensing of a facility.

The biggest problem is the announcement that EPA is moving ahead, interjecting a large amount of regulatory uncertainty for a private company that would propose a site. EPA has stated that their standards will generally be consistent with NRC; and therefore, people should not be concerned.

EPA has said that before and that has turned out not to be the case. I think uranium mill tailings is an example of that. So our biggest concern is the uncertainty it injects into the process.

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However, I would not argue that the Nation should not have general standards protecting the public from radiation from low-level waste. But it's the timing. One possible solution would be if the EPA standard is restricted to strictly a performance standard, and does not get into a design-type standard. We think the NRC standards, 10 CFR 61, adequately addresses the design standards that a facility needs to meet, and that EPA should definitely not get into that level of detail.

Senator SIMPSON. Well, that has been a very vexing part of my activities chairing the Nuclear Regulation Subcommittee, and dealing with EPA, who, under the law, really in some cases under the law is not even required or requested to be involved. And then when they get involved, I must say that I feel that they have an inadequate staff to deal with nuclear issues. And that's a very—it's very frustrating.

Mill tailings was an example, but certainly the more you press them, the longer the delays. That's all I have found. And I don't really want to see—that's my view—the EPA continuing to dabble, as they do, and I have watched them before, because they never get anything done with it. I am sure you have found that frustrating in your time.

Mr. SLOSKY. Yes, all the regions have discussed this and they are all very concerned about the problems a new EPA standard at this late date could cause the siting of new facilities.

Senator SIMPSON. It would be my view that it would simply just stall the whole works. Period.

Mr. SLOSKY. It could very well.

Senator SIMPSON. Regardless of how good the intent of Wyoming, or New Mexico, or Colorado, or Arizona, or even if California should come in, or whatever.

Well, all right. Thank you very much. Very helpful.

Mr. SLOSKY. Thank you.

[Prepared statement of Leonard C. Slosky follows:]

TESTIMONY OF

LEONARD C. SLOSKY

EXECUTIVE DIRECTOR

OF THE

ROCKY MOUNTAIN LOW-LEVEL RADIOACTIVE WASTE COMPACT BOARD

TO THE

COMMITTEE ON THE JUDICIARY

UNITED STATES SENATE

CHEYENNE, WYOMING

JANUARY 12, 1984

Testimony to the Senate Committee on the Judiciary
Leonard C. Slosky
January 12, 1984

My name is Leonard Slosky. I am the Science and Technology Advisor to Governor Lamm of Colorado and am appearing today in my capacity as Executive Director of the Rocky Mountain Low-Level Radioactive Waste Board. I have represented the State of Colorado on, and served as chairman of, the negotiating group which developed the Rocky Mountain Low-Level Radioactive Waste Compact. I welcome the opportunity to share with you the experience of the Rocky Mountain states in developing an interstate compact on low-level radioactive waste.

HISTORY OF STATE ACTION

As was the case in most states, low-level radioactive waste disposal was a non-issue in Colorado until Nevada and Washington temporarily closed the commercial disposal sites in their states and South Carolina reduced the intake of the site located in that state in 1979. At that point, we suddenly became aware of the vulnerability of the commercial low-level radioactive waste disposal system in the United States. Had the two western sites remained closed, critical health care and educational functions of government would have had to be curtailed. In Colorado, 80 percent of the low-level radioactive waste was generated by state institutions, such as universities and hospitals, which are also the generators which have traditionally had the least capacity to store wastes. We were therefore faced with the potential of having to curtail or completely halt such essential practices as medical diagnoses; treatments such as cancer therapy; health research; and graduate education programs which produce low-level radioactive waste as a byproduct.

Fortunately, as the sites in Washington and Nevada re-opened, the situation did not reach that critical stage. However, the experience did bring many of us to the realization that:

1. Activities which are essential to the health and welfare of the State's citizens are dependent on a few critical facilities over which we had absolutely no control — namely the disposal sites.

2. The western states in which existing low-level radioactive waste disposal facilities are located generate a very small amount of the waste received at those facilities and receive very little benefit for accepting large amounts of waste.

Whether we like it or not, limiting the waste coming into a site from other states has become a political necessity. Although the importance of the goods and services whose development and use result in low-level radioactive wastes is widely acknowledged by society, no one wishes to live near the facilities which are necessary for disposing of that waste. Opposition to a waste facility grows exponentially as the amount of waste for disposal from other states increases. The consequence is that it becomes extremely difficult, if not impossible, to establish the necessary disposal facilities unless a system is developed to ensure an equitable sharing of responsibilities among states.

From this realization, Colorado and a number of other states concluded that the states would have to take a larger responsibility in assuring the proper disposal, preferably on a regional basis, of the low-level radioactive waste generated within their borders. This principle, which was affirmed by the National Governors' Association, the State Planning Council on Radioactive Waste Management, and the National Conference of State Legislatures, became the cornerstone of the Low-Level Radioactive Waste Policy Act of 1980. The State of Colorado has been particularly conscious of this principle, considering that state institutions generate the majority of the low-level radioactive waste in Colorado and other Rocky Mountain states.

Colorado's next step in addressing the low-level radioactive waste issue was to determine how to assure adequate and reliable disposal capacity for the needs of its low-level radioactive waste producers. Recognizing the problem of the states currently hosting low-level radioactive waste disposal sites and not wanting to repeat their experience of having a disposal facility in which the great majority of waste was generated in other states, our first and primary criterion was to be able to control the origin of the waste allowed for disposal.

The most obvious and, at first glance, simplest solution would have been to develop a facility for the disposal of only that low-level radioactive waste generated in Colorado. This would have eliminated the need to develop an interstate compact on low-level radioactive waste disposal (requiring negotiations on a highly politically charged issue among the governors of six states); the adoption of an interstate compact by very independently minded state legislatures, and Congressional ratification.

To this end, Colorado analyzed legal precedents and arguments regarding a state-owned and -operated site for disposing of only that waste generated in the State. There are those who argue that a state can legally exclude out-of-state waste from a site it owns and operates. While there is some possibility of success of such an approach, the consequences of failure are devastating. In addition, without an interstate compact there is nothing to prevent a private firm from entering a state and developing a commercial facility that could accept low-level radioactive waste from throughout the country. We therefore concluded that, to ensure our control over a low-level radioactive waste disposal facility, an interstate compact was the safest and most reasonable approach.

DEVELOPMENT OF THE ROCKY MOUNTAIN COMPACT

Following the assessment of options available to Colorado, work began in earnest on the lengthy compact negotiating process. The first official meeting of the governors' representatives from several western states was held in December 1980, two weeks before Congressional passage of the Low-Level Radioactive Waste Policy Act. In fact, as early as mid-1980 the western states had begun preliminary meetings on the compact issue. The December meeting marked a turning point, however, with the decision by the western states to split into Northwest and Southwest compact regions. The Southwest region evolved over the following year into the Rocky Mountain Compact.

Throughout 1981, the governors' representatives of the Rocky Mountain states met frequently, determining the philosophy and policy they wished to follow in the Rocky Mountain region and hammering out the details of the Compact to embody those principles. This was an arduous task. It involved decisions going to the very heart of political philosophy, from determinations of the equitable sharing of responsibilities and commitments among the party states to state versus regional authority. It required a high degree of commitment, intelligence, and integrity on the part of the Compact negotiators, which is reflected in the scope and language of the Compact. The Rocky Mountain Compact negotiating group operated under a self-imposed deadline of January 1982 to reach agreement on the Compact and have the document ready for introduction in the 1982 sessions of the state legislatures.

STATUS OF THE ROCKY MOUNTAIN COMPACT

The State of Colorado adopted the Rocky Mountain Compact into law in May 1982. The Compact was signed into law in Wyoming in February 1983 in New Mexico in March 1983 and Nevada in May 1983.

As of this time the State of Arizona has not decided whether to join the Compact. Although the State of Utah has joined the Northwest Compact, it has maintained its links with the Rocky Mountain Compact in the event a new disposal facility in the Rocky Mountain region proves to serve its needs better than the Northwest Compact's. Recently the States of California, South Dakota and North Dakota have indicated an interest in exploring possible membership in the Rocky Mountain Compact.

The Rocky Mountain Compact was introduced in the U. S. Senate on October 21, 1983 by Senator Simpson of Wyoming as S. 1991. Co-sponsors of the legislation include Sentors Armstrong (CO), Bingaman (NM), Domenici (NM), Garn (UT), Hart (CO), Hatch (UT), Hecht (NV), Laxalt (NV), and Wallop (WY).

The Compact was introduced in the U.S. House of Representatives on November 15, 1983 by Congressman Wirth of Colorado as H.R. 4388. Co-sponsors include Congresspeople Brown (CO), Cheney (WY), Hansen (UT), Kogovsek (CO), Kramer (CO), Lujan (NM), Marriott (UT), Nielson (UT), Reid (NV), Richardson (NM), Schaefer (CO), Schroeder (CO), Skeen (NM), and Vucanovich (NV).

PROVISIONS OF THE ROCKY MOUNTAIN COMPACT

Attachments A and B are the text of the Compact as adopted by Colorado and a summary of the key provisions of the Compact, respectively.[1] Through the establishment of the Rocky Mountain Compact, the States of Colorado, Arizona, Nevada, New Mexico, Utah and Wyoming have devised an equitable system to fulfill their responsibilities for assuring adequate disposal facilities for the low-level radioactive waste generated within their borders while preserving the health and safety of their citizens.

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1. C.R.S. 24-60-2201 et. seq., 1973

Host State Identification. The principal feature of the Rocky Mountain Compact is its mechanism for identifying host states. The Compact requires any member state which generates at least 20 percent of the region's waste to host a low-level radioactive waste facility.[2] In the event that two or more states fall into this category, it is up to the Compact Board to decide when and how those states will fulfill their responsibilities. This system was established because of the extreme split in the region between four very small generating states and two states, Colorado and Arizona, which generate the majority of the region's waste. It has been the philosophy of the Rocky Mountain region that the large generating states have a commensurately larger interest and responsibility for ensuring adequate disposal capacity and that the small generating states, which will be contributing only a small fraction of the waste, should not be required to carry the burden of hosting the disposal facility. This decision was relatively easy to make, considering that in 1981 Colorado generated 70 percent of the region's waste and that by 1985, when Arizona's nuclear power plant is expected to be fully operational, 95 percent of the region's waste will be generated by these two states. (Attachment C contains 1981 and projected future low-level radioactive waste generation rates for the Rocky Mountain region.)

Export Prohibition. The Rocky Mountain Compact prohibits the export of low-level radioactive waste for management outside the region.[3] A prohibition against waste export would be superfluous if every low-level radioactive waste management facility were controlled by a regional compact. However, if an independent facility were available, export of waste from the region would seriously jeopardize the economic viability of the Rocky Mountain facility. To guard against this eventuality, the Rocky Mountain states agreed that an export prohibition was necessary.

Fee Regulation. A fee regulation provision was included because the Compact will create a captive market for the regional low-level radioactive waste management facilities.[4] Since the small volume of waste generated in the Rocky Mountain region is not sufficient to support a number of facilities, there will be no opportunity for

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2. C.R.S. 24-60-2200 Article 3 C., 1973
3. C.R.S. 24-60-2200 Article 7 B., 1973
4. C.R.S. 24-60-2200 Article 3 D. (3), 1973

effective competition for management services. Therefore, the Compact requires the host state, subject to the approval of the Compact Board, to ensure that fees charged by regional management facility are reasonable.

Compact Surcharges. The Compact authorizes a state surcharge, with the amount subject to Board approval, to cover the costs to the host state of the facility's licensure and regulation, reserves for decommissioning and long-term care, and local impact mitigation.[5] Colorado has further provided for local impact assistance by authorizing the county or municipality in which a regional facility is located to levy a maximum fee of two percent of the annual gross revenue received by the facility, less county taxes.[6] Similarly, the Compact Board is authorized to levy a surcharge on waste received at any regional facility to support the activities of the Board.[7] These surcharges are intended to ensure that the waste generators pay the full cost of management and regulation, without burdening state or federal taxpayers.

Definition of Low-Level Radioactive Waste. The Rocky Mountain Compact's definition of low-level radioactive waste does not duplicate word for word that of the Low-Level Radioactive Waste Policy Act. However, the definition is compatible with the intent of the Low-Level Radioactive Waste Policy Act. A satisfactory definition of low-level radioactive waste has proven to be elusive to both the federal and state governments. Whereas defining low-level radioactive waste in terms of what it <u>is not</u> is very troubling to the states and many non-bureaucrats, the Rocky Mountain Compact definition of low-level radioactive waste attempts to provide greater understanding of both what low-level radioactive waste is, and <u>is not</u>.[8]

Although the definition of low-level radioactive waste in both the Low-Level Radioactive Waste Policy Act and the Rocky Mountain Compact exclude high-level waste, the Rocky Mountain Compact provides a few examples of what high-level waste is, consistent with the Nuclear Regulatory Commission's (NRC) definition. Both exclude byproduct material as defined in Section 11e.(2) of the Atomic Energy Act

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5. C.R.S. 24-60-2200 Article 5 B., 1973
6. C.R. 24-60-2008, 1983
7. C.R.S. 24-60-2200 Article 5 A., 1973
8. C.R.S. 24-60-2200 Article 2 G., 1973

of 1954, with the Compact adding the phrase "as amended on November 8, 1978," so that we are not trying to hit a moving target.[9]

Definition-Transuranics — The Rocky Mountain Compact excludes waste containing more than ten nanocuries of transuranic elements per gram of material.[10] The specificity of prescribing ten nanocuries as the upper limit for accepting low-level radioactive waste contaminated with transuranic elements was a conscious decision by the negotiating states. The Low-Level Radioactive Waste Policy Act excludes by reference transuranic waste as defined in section 11e.(2) of the Atomic Energy Act of 1954, under which the NRC is charged with promulgating the actual transuranic waste definition.[11] At the time the Low-Level Radioactive Waste Policy Act was passed and the Rocky Mountain Compact was negotiated, transuranic waste was defined by the NRC as material containing no more than ten nanocuries of transuranic elements per gram of material. However, the states were aware that the NRC was considering raising this limit to 100 nanocuries. The Compact negotiators were faced with a dilemma: either to specify a nanocurie limit in the Compact and thus assure a stable definition of low-level radioactive waste acceptable for disposal, or to incorporate by reference the federal definition and thus open the regional site to accepting whatever transuranic material the NRC defined as low-level radioactive waste — waste which the states never understood to be included. To illustrate the states' concern about a variable definition, I have discovered that although the general limit on transuranic contamination of low-level radioactive waste is 100 nanocuries, NRC allows up to 20,000 nanocuries of Curium-242 in low-level radioactive waste.

The Rocky Mountain states were unwilling to adopt — and in fact at least one state was constitutionally prohibited from adopting — by reference a definition which is beyond the states' authority to control. As a result, the Compact specifies a ten nanocurie per gram maximum concentration for low-level radioactive waste.[12]

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9. C.R.S. 24-60-2200 Article 2 G. (4), 1973
10. C.R.S. 24-60-2200 Article 2 G. (3), 1973
11. P.L. 96-573 Sec. 2.(2) (42 USC 2021b.)
12. Arlington v. Arlington, 618 P.2d 744 (Colo. App. 1980)

As expected, the NRC has increased the allowable limit of transuranic elements in low-level radioactive waste to 100 nanocuries per gram, and raised this issue in their comments on the Compact.[13] The amount of waste which would fall between the ten and 100 nanocurie limits of the two definitions is extremely small. Under the Rocky Mountain Compact, the Compact Board and the host state have the authority to permit the disposal of such waste at the regional facility. The Compact Board has now agreed to accept the same low-level radioactive waste as currently defined by the NRC.

Definition-Federal Waste — The Rocky Mountain Compact excludes from the definition of low-level radioactive waste all waste generated by federal government defense and research and development activities.[14] The Low-Level Radioactive Waste Policy Act specifically excludes "low-level radioactive waste produced by atomic energy defense activities of the Secretary [of Energy] or federal research and development activities."[15] The states have viewed the Congressional intent of the Low-Level Radioactive Waste Policy Act as vesting in the states the responsibility for providing for the disposal of non-federal, commercially generated low-level radioactive waste.[16]

As a result, the Rocky Mountain states determined during the Compact negotiation process that the Rocky Mountain Compact was not be responsible for defense low-level radioactive waste, whether generated by the Department of Energy or Department of Defense. After the Rocky Mountain Compact was negotiated, the point was raised that Department of Defense low-level radioactive waste must be accepted at compact sites since such waste is not explicitly excluded under the Low-Level Radioactive Waste Policy Act. The Compact Board has now agreed to accept federal waste generated within the region other than Department of Energy defense waste, under appropriate conditions and with some restriction.

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13. 10CFR61.55, December 27, 1982
14. C.R.S. 24-60-2200 Article 2 G. (1), 1973
15. P.L. 96-573 Sec. 3. (b) (42 USC 2021c.)
16. Congressional Record 12494, December 13, 1980

Definition-Mining — The Rocky Mountain Compact's definition also specifies that "wastes from mining, milling, smelting, or similar processing of ores and mineral bearing material primarily for minerals other than radium" is not low-level radioactive waste.[17] This provision was not included in the Low-Level Radioactive Waste Policy Act although it is understood that the exclusion of byproduct material as defined in Section 11e.(2) of the Atomic Energy Act has the same effect. The Compact negotiators were compelled to add this provision after the uranium mining industry raised concerns that, without such additional language, low-level radioactive waste could be interpreted to include uranium mill tailings. This in turn would require the disposal of all uranium mill tailings in regional low-level radioactive waste facilities, which was clearly not the intent of Congress or the states.

Management v. Disposal. As do all the low-level radioactive waste compacts, the Rocky Mountain Compact concerns regional planning for the management of low-level radioactive waste as well as disposal.[18] The states took this approach very deliberately because the low-level waste disposal problem cannot be properly solved in isolation from the rest of the management system in which disposal occurs. The states recognized the close interrelationship of transportation and non-disposal management techniques, such as volume reduction to disposal. This is well-illustrated by the problems which occured at the Beatty, Nevada site in the 1970's. Nevada's experience has clearly shown that control over the disposal site is not in itself sufficient, that enforcement of applicable packaging and transportation requirements is essential.

Although the Compact addresses certain aspects of low-level radioactive waste management beyond disposal, it is totally compatible with the existing federal/state regulatory framework. The Compact requires approval of regional facilities for the management of low-level radioactive waste by the Compact Board. "Management" is defined to include the collection, consolidation, storage, treatment and incineration, as well as disposal, of low-level radioactive waste.[19] However, as with disposal

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17. C.R.S. 24-60-2200 Article 2 G. (5), 1973
18. C.R.S. 24-60-2200 Article 1 A.; Article 3 A. and B.; Article 7 C. and D.; 1973
19. C.R.S. 24-60-2200 Article 2 H., 1973

facilities, the Compact Board's authority over other management facilities is limited to approval only for economic feasibility and need.[20]

It is imperative that a compact region have a clear picture of the low-level radioactive waste generated and the disposal capacity required. This cannot be done if it is not known what other management facilities, such as incinerators or compactors, will be installed which will significantly affect the volume, type, and classification of low-level radioactive waste ultimately disposed. Thus the Compact Board's authority extends beyond burial sites to all low-level radioactive waste management facilities in order to ensure a rational regional system.

Management-Transportation and Packaging — The Compact also requires all party states to adopt and enforce procedures requiring that low-level radioactive waste shipments conform to packaging and transportation requirements and regulations.[21] By this we do not seek to grant the region or its member states any additional authority over transportation or packaging nor to interfere with federal transportation and packaging laws or regulations. This provision is a commitment by the party states to adopt and enforce federal and state packaging and transportation requirements as provided by federal law, rather than an attempt by the Compact to challenge the preemptive authority of the federal government in this area.

Board Approval of Facilities. The Rocky Mountain Compact does not establish a large or broad regional regulatory authority. It follows the "weak board, strong state" model, with the preservation of existing federal/state low-level radioactive waste regulatory authority. The Compact creates a Board, composed of one representative from each member state.[22] Under the terms of the Compact, it will be unlawful for anyone to dispose of low-level radioactive waste within the region except at regional facilities approved by the Compact Board.[23] (There is an exemption for generators who, prior to January 1, 1982, had been disposing of their own wastes on their own property.) A proposed facility can be authorized as a regional facility

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20. C.R.S. 24-60-2200 Article 4. B., 1973
21. C.R.S. 24-60-2200 Article 3 F., 1973
22. C.R.S. 24-60-2200 Article 6 B., 1973
23. C.R.S. 24-60-2200 Article 3 B., and Article 7 A., 1973

only by approval of the Board.[24] The Compact Board's authority however, is limited to considerations of economics and need.[25] The Board can approve a regional facility only if it determines that there will be sufficient demand to render the proposed facility economically feasible without endangering the economic viability of any other regional facility and only if the proposed facility will have sufficient capacity to serve the needs of the region for a reasonable period of time. All facility siting and licensing authority continues to reside with the host state or, in the case of a non-agreement state or a state which has not entered into a 274i agreement, with the NRC.[26]

QUESTIONS POSED BY THE COMMITTEE

1. What steps have been and will be taken to ensure that, upon ratification of the Rocky Mountain Low-Level Radioactive Waste Compact by Congress, a facility will be available in a timely fashion to meet the disposal needs of this region? Will it be possible to do so by January 1, 1986, the so-called "exclusionary date"?

As Colorado generates 90 percent of the waste of the four states which are currently members of the Rocky Mountain Compact, Colorado is the only state which under the 20 percent "trigger" in the Compact has an obligation to develop a new low-level radioactive waste management facility. When Colorado adopted the Rocky Mountain Compact into law, the State recognized this responsibility and so included implementing legislation which established a process for facility siting.[27] Under the Colorado Low-Level Radioactive Waste Act, Colorado counties are provided the initial opportunity to volunteer areas within their borders for a low-level radioactive waste site.[28] If no site has been recommended by a board of county commissioners by January 1, 1984, the Colorado Department of Health may conduct a statewide assessment and evaluation of potential areas deemed suitable for a low-level radioactive waste facility.[29] Throughout this assessment, private firms would be provided an opportunity to propose developing a site in any one of the potentially suitable areas.

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24. C.R.S. 24-60-2200 Article 2 L., 1973
25. C.R.S. 24-60-2200 Article 4 B., 1973
26. C.R.S. 24-60-2200 Article 3 D., 1973
27. C.R.S. 24-60-2205, 2206, 2207; 1973
28. C.R.S. 24-60-2206, 1973

In the event there is no low-level radioactive waste disposal facility proposed or approved by January 1, 1985, the Colorado Department of Health would develop an alternative plan for facility development and submit it to the Colorado General Assembly by January 1, 1986, for approval.[30] This provision was included to cover the eventuality that no private firm would be interested in establishing a disposal facility for the Rocky Mountain region. In that case, an alternative plan would be drawn up, providing for a state-owned and -operated facility. A state-owned facility would be developed only as a last resort. At this time, development of such an alternative plan is not expected to be necessary.

The Colorado siting process also allows a private firm to propose other sites during this process. However, the Colorado Department of Health is prohibited by law from licensing any low-level radioactive waste disposal facility not located in an area identified as acceptable in the statewide assessment or recommended by a board of county commissioners, unless it is demonstrated that the proposed site is at least as technically suitable as either the state- or county-designated areas.

To the amazement of many, Montrose County, Colorado has responded positively to the siting of a low-level radioactive waste disposal facility within its borders. Chem-Nuclear Systems, Inc. identified a potential site in Montrose County over a year ago. However, the site near Naturita, Colorado, has been eliminated from consideration due to geotechnical concerns. Chem-Nuclear Systems, Inc. has identified a number of alternative potential sites in Colorado, but has not proceeded on any of these. Montrose County continues to be interested in hosting a low-level radioactive waste facility and is expected to recommend some specific sites in the near future.

We have concluded that the five-year development period frequently cited for development of a low-level radioactive waste disposal facility can be reduced significantly. With the experience gained through the site exploration activities currently underway in Colorado, we have determined that without major impediments, the entire pre-operational activities can be completed in less than three years without

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29. C.R.S. 24-60-2207, 1973
30. C.R.S. 24-60-2207 (e), 1973

reducing attention to health and safety or other public concerns. What it does require is a high level of communication and coordination among all parties concerned, particularly the facility proponents and local, state, and federal authorities. However, it appears very unlikely that a new Rocky Mountain regional facility will be operational by the January 1, 1986, "exclusionary date". If no major obstacles arise I would estimate the new Rocky Mountain facility will be operational some time in 1987.

As an NRC agreement state, Colorado is proceeding to develop regulations for the licensing of a low-level radioactive waste disposal facility. In addition, with the assistance of the U.S. Department of Energy, the State is conducting studies and other planning activities to facilitate and expedite the siting of a new facility.

With the development of an interstate Compact, its adoption by several states, the interest by a private firm in developing a facility to meet the region's needs, and the receptivity of a community to hosting a new low-level radioactive waste disposal site, much progress has been made in a relatively short period of time. However, this progress can continue only under a Congressionally ratified Compact. If Congress delays in its consent to the Compact, Colorado may be forced to suspend its siting activities since its exclusionary authority will be uncertain.

> 2. Based upon current and projected rates of generation of low-level waste, is it reasonable to expect that the Rocky Mountain region will be able to design, construct, license, and operate a low-level waste disposal facility that satisfies all applicable health and safety requirements and, at the same time time, is economical to operate?

Economics has been of particular concern to the Rocky Mountain Compact region because of frequent warnings that the region simply does not generate sufficient volumes of waste to make a low-level radioactive waste disposal facility economically feasible. After considerable study, we have concluded that a small low-level radioactive waste disposal site is economically feasible. We have recently published a study which documents that a facility disposing of the Rocky Mountain region's relatively small volume of waste can do so profitably and in compliance with all health and safety requirements, while charging disposal fees comparable to those

currently levied by existing disposal facilities.[31] I have provided the Committee a copy of this study and have included a summary in Attachment B of this testimony.

In addition, this study did not consider two categories of large volume radioactive wastes which could make the development of a low-level radioactive waste disposal site in Colorado much more attractive to a private developer. These are the "Denver radium wastes" consisting of at least three million cubic feet of material, and several million tons of waste under the Uranium Mill Tailings Remedial Action Program. Colorado is very interested in the development of sites which would accommodate several of these types of radioactive wastes.

> 3. What provisions have been included in this compact to ensure that the uniform national requirements governing the packaging and transportation of low-level waste will be enforced in a consistent fashion throughout the region?

The Rocky Mountain Compact does not alter the existing federal/state regulatory system governing packaging and transportation of low-level radioactive waste. The Compact does not authorize the establishment of packaging or transportation requirements by the member states or the Compact Board. Originally, the NRC expressed concern that the Compact could be interpreted to allow the member states or the Board to impose packaging or transportation requirements which would be inconsistent with federal law. On August 5, 1983 the Compact Board unanimously adopted Resolution 2 stating that this will not be done (Attachment D). In response, the NRC has stated that the Resolution has resolved concerns with the Compact[32].

In adopting the Compact, the member states commit to adopt and enforce procedures requiring low-level radioactive waste shipments originating within their borders to conform to packaging and transportation requirements, and to take enforcement action against non-conforming shipments originating in their state. This is not interperted

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31. Mary Whitman, Leonard Slosky, Susan Mizner, Colleen Murphy, Economics of a Low-Level Radioactive Waste Management Facility for the Rocky Mountain Region, Office of the Governor, State of Colorado, September 1983.
32. Letter from G. Wayne Kerr, Director Office of State Programs, NRC to Leonard Slosky, Chairman Rocky Mountain States Compact Negotiation Group, August 3, 1983.

to require all member states to become NRC agreement states. This provision was included to provide the host state with leverage on member states which may have a high number of non-conforming shipments.

> 4. To what extent, if any, does the membership of this compact--consisting, as it does, of both agreement and non-agreement states--pose the need for additional coordination in the licensing of a disposal facility and in the regulation of packaging and transportation of low-level waste within the region?

Since the Compact does not alter the existing federal/state regulatory framework, no greater coordination would be necessary under the Compact than is already the case. Under the Compact, all health and safety regulatory authority continues to reside with the individual states and/or the NRC. We do not anticipate any problems due to the fact that both agreement and non-agreement states are members of the Rocky Mountain Compact. Because agreement state programs must be compatible with NRC regulations, the region believes that whether regulated by NRC or the states, public health and safety will be protected. I would point out that the states in the Rocky Mountain region which are expected to have an obligation to host a facility are agreement states. The Compact also does not diminish the authority of states to regulate low-level radioactive waste facilities in respects not preempted by federal law.

> 5. What is your view on the disposal of low-level waste generated by the federal government at a regional disposal site? In particular, under what terms and conditions, if any, would you agree to the disposal of such waste at a regional facility?

As provided in the Low-Level Radioactive Waste Policy Act, the Rocky Mountain Compact Board believes that the region should have no obligation to dispose of "low-level radioactive waste produced by atomic energy defense activities of the Secretary [of Energy]."[33] Even though this statute's wording apparently also excludes low-level radioactive waste resulting from "federal research and development activities", the Compact Board has agreed to accept this waste.

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33. P.L. 96-573 Sec. 3. (b) (42 USC 2021c)

After lengthly discussions among all of the compact regions and a number of federal agencies, it has been concluded that the regions should be responsible for the disposal of federal low-level radioactive waste except for Department of Energy defense waste. The regions will insist, however, that all federal waste disposed of at regional facilities comply with the same conditions, regulations, requirements, taxes, and surcharges as non-federal waste.

Due to the small quantity of non-federal waste generated in the Rocky Mountain region and the public sensitivity to federal waste disposal, the Rocky Mountain Low-Level Radioactive Waste Board strongly requests that the region be provided assurances particularly from the U.S. Department of Defense that federal waste will not constitute a major portion of the waste disposed of at regional facilities. The Board is anxious to enter into agreements with the Department of Defense and other significant federal generators prescribing the quantities of federal waste which may be disposed of at facilities in the Rocky Mountain region. Such agreements could be structured to be renegotiated every five years or so, as conditions may warrant.

The Compact Board would find unacceptable a provision authorizing the disposal of federal waste generated outside the region in Rocky Mountain regional facilities without approval as provided in the Compact.

Attachment C contains proposed consent language which would effectuate the disposition of federal low-level radioactive wastes as discussed above.

> 6. In the event that the Congress should conclude that, prior to ratification of this compact, there are certain issues or provisions that require further clarification or modification, what approach, in your view, will best serve to accomplish this end in a fashion that will withstand future legal challenges while at the same time minimizing or eliminating the need for each compact state to readopt the compact?

The federal interest in low-level radioactive waste compacts should be to assure that a reasonable national system for the management of such waste is brought into effect, and to assure that federal regulatory authorities are not inappropriately encroached upon. The Rocky Mountain region has been working with the other regions, the

executive branch agencies and Congressional staff to resolve the federal concerns with the compacts. We believe our proposed Congressional consent language resolves the concerns raised by the U.S. Departments of Energy and Transportation, the Nuclear Regulatory Commission as well as the numerous federal agencies which generate low-level radioactive waste. The overriding concern is that the regions not be placed in the untenable position of resubmission of the compacts to 33 state legislatures which have already ratified the compacts in order to resolve these issues when non-legislative solutions are readily available.

We believe that certain clarifications to the Rocky Mountain Compact should be made in the process of Congressional consent, as outlined in this testimony. However, changes to the compact which would require readoption of the Compact by the state legislatures can and should be avoided. Because of the specific authority which the state legislatures have granted to the Rocky Mountain Compact Board, all of the issues which have been raised with this Compact can and should be resolved through consent language which does not require subsequent action by the state legislatures. Following Congression consent to the Compact which we expect to be conditioned in certain respects, the Rocky Mountain Board plans to adopt a resolution agreeing to the conditional consent provisions so that there will be no doubt as to whether the region acepts these clarifications.

ADDITIONAL CONGRESSIONAL CONSENT ISSUES

Definition of Low-Level Radioactive Waste. The Rocky Mountain Low-Level Radioactive Waste Board recognizes the clear federal interest in assuring compatible definitions of low-level radioactive waste in all compacts. However, there is no reason to force all regions to have identical, word for word definitions. The criterion for judging the compact definitions should be that they be equivalent in effect; that no wastes be arbitrarily excluded from disposal at regional facilities. In the Rocky Mountain Compact there are two definitional issues; federal waste (which has been discussed above) and transuranics.

Transuranics — On August 5, 1983, the Rocky Mountain Low-Level Radioactive Waste Board voted unanimously to accept for disposal at regional facilities waste material containing transuranic elements not exceeding 100 nanocuries per gram of

waste. This action was taken pursuant to Article 7 of the Compact[34], which authorizes the Compact Board to allow the management of radioactive wastes other than low-level radioactive waste as defined in Article 2 of the Compact. With the proposed Congressional conditional consent language and the action taken by the Compact Board, the Rocky Mountain Compact will accept the same low-level transuranic wastes as currently defined by the NRC.

Nuclear Regulatory Commission Issues. The NRC has raised three concerns regarding the Rocky Mountain Compact:

- That the Rocky Mountain Low-Level Radioactive Waste Board may establish regional health, safety, or environmental regulatory functions,

- That the Compact's restriction on export of waste from the region could be viewed as a burden on interstate commerce,

- That the Rocky Mountain Low-Level Radioactive Waste Board may inspect licensees of the NRC or promulgate packaging or transportation standards which may be inconsistent with federal law.

On August 5, 1983 the Rocky Mountain Low-Level Radioactive Waste Board unanimously adopted Resolution 2 (Attachment D) stating that the Board does not intend to implement the Compact so that any of these concerns will be realized. With the adoption of this resolution, the NRC has stated that there are no remaining concerns with the Rocky Mountain Compact[35].

NEED FOR CONGRESSIONAL ACTION

Rapid Congressional ratification of the low-level radioactive waste compacts is critical to the sucessful conclusion of this exemplary federal/state partnership. Considering the technical and legal complexities as well as the political explosiveness of this

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34. C.R.S. 24-60-2200 Article 7 D., 1973
35. Letter from G. Wayne Kerr, Director Office of State Programs, NRC to Leonard Slosky, Chairman Rocky Mountain States Compact Negotiation Group, August 3, 1983

issue, the regions have moved with great speed in the compacting process. If in 1984, Congress does not consent to the four compacts which are now before it, great disenchantment will result and the delicate regional low-level radioactive waste framework may begin to unravel.

Post 1986 Issues. Expedient Congressional consent to the compacts without change to the 1986 exclusionary date is essential for continued progress. We believe that the regions will be able to reach agreements which will accommodate the needs of both the regions with existing sites and those regions which are in the process of developing new sites. Federal intervention into this very sensitive area at this time would be detrimental to the states' current efforts.

Any discussion of extending the 1986 date for regional exclusivity at this time would be counterproductive. If the 1986 date does not remain a firm target, the momentum toward solving this problem will be reduced and some states may act less rapidly. In addition, regions including the Rocky Mountain region will be hesitant to establish new disposal facilities if their exclusionary authority is uncertain. I believe that states will be able to accommodate the 1986 exclusionary date without federal action beyond ratification of the compacts as submitted. The infant compact regions have already initiated interregional discussions to ensure that no compact region actively pursuing a disposal facility will find itself left out in the cold in 1986.

I would also caution Congress against making changes to the compacts which would necessitate resubmission of the compacts to the state legislatures. The Rocky Mountain states believe most strongly that all regions should be allowed flexibility to define solutions for the low-level radioactive waste problem as it exists in each region of the country. While there is unquestionably the need for overall national compatibility, the states should not be straight-jacketed in their quest for solutions. The Low-Level Radioactive Waste Policy Act represents an unusual opportunity for a true federal/state partnership in solving an important national problem. The Low-Level Radioactive Waste Policy Act can be a new beginning in federal/state relations, one in which the Congress, in consultation with the states, establishes broad policy guidance and then allows the states to develop solutions which are responsive to their varying needs.

I hope that this Committee will expeditiously and favorably consider the low-level radioactive waste compacts which are now before it. Positive Congressional action will reinforce the need for all regions of the country to renew their efforts in implementing a responsible, equitable system for low-level radioactive waste management, without the need for a major new federal program.

I would like to close with a special word of thanks to the Department of Energy (DOE) and its prime contractor, EG&G Idaho, Inc., for the invaluable assistance they have provided the Rocky Mountain region. Their technical assistance has enabled state policy-makers to develop a clear understanding of the issues affecting low-level radioactive waste management, and to design a compact that addresses those issues and the unique institutional features of the Rocky Mountain states. The funding provided by the Department of Energy to develop and implement the Compact has been, and for the short term will continue to be, of critical importance to the success of the program.

Attachment A
Testimony to the Senate Committee on the Judiciary
Leonard C. Slosky
January 12, 1984

ROCKY MOUNTAIN LOW-LEVEL RADIOACTIVE WASTE COMPACT

REGIONAL LOW-LEVEL WASTE PROJECTIONS

1981

State	Institutional Cubic Ft	%	Industrial Cubic Ft	%	Utility Cubic Ft	%	Total Cubic Ft	%
Colorado	16,085	65	5,999	24	2,500	10	24,584	91
Nevada	750	100	-	-	-	-	750	2
New Mexico	625	51	600	49	-	-	1,225	5
Wyoming	400	100	-	-	-	-	400	1
TOTAL	17,860	66	6,599	24	2,500	9	26,959	100

1985

Colorado	22,909	71	7,018	22	2,500	8	32,427	91
Nevada	830	89	100	11	-	-	930	3
New Mexico	1,188	70	500	30	-	-	1,688	5
Wyoming	424	100	-	-	-	-	424	1
TOTAL	25,351	71	7,618	21	2,500	7	35,469	100

1990

State	Institutional Cubic Ft	%	Industrial Cubic Ft	%	Utility Cubic Ft	%	Total Cubic Ft	%
Colorado	31,613	74	8,538	20	2,500	6	42,651	94
Nevada	910	86	150	14	-	-	1,060	2
New Mexico	995	69	440	31	-	-	1,435	3
Wyoming	424	100	-	-	-	-	424	1
TOTAL	33,942	74	9,128	20	2,500	5	45,570	100

1995

Colorado	43,747	77	10,388	18	2,500	4	56,635	95
Nevada	1,000	83	200	17	-	-	1,200	2
New Mexico	1,040	68	480	32	-	-	1,520	3
Wyoming	459	100	-	-	-	-	459	1
TOTAL	46,246	77	11,068	19	2,500	4	59,814	100

2000

Colorado	60,683	80	12,639	17	2,500	3	75,822	96
Nevada	1,110	82	250	18	-	-	1,360	2
New Mexico	1,070	68	500	32	-	-	1,570	2
Wyoming	459	100	-	-	-	-	459	1
TOTAL	63,322	80	13,389	17	2,500	3	79,211	100

DOE/ID/12371-6

Attachment B
Testimony to the Senate Committee on the Judiciary
Leonard C. Slosky
January 12, 1984

ECONOMICS OF A LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT FACILITY FOR THE ROCKY MOUNTAIN REGION

Mary Whitman
Leonard Slosky
Susan Mizner
Colleen Murphy

State of Colorado
Office of the Governor
Denver, Colorado 80203

Published September 1983

This report is based on a study prepared for the State of Colorado by Ford, Bacon & Davis, Inc.

1. INTRODUCTION

Under a grant received from the U.S. Department of Energy, the State of Colorado contracted for a study to evaluate the economic feasibility of operating a low-level radioactive waste disposal facility for the six-state Rocky Mountain Region and to assess the management options and the economic impacts as they relate to the specific circumstances in the Rocky Mountain Region. This document details the findings of that study.

The Rocky Mountain Compact requires the establishment of a low-level radioactive waste disposal facility within the region to dispose of the low-level radioactive wastes generated by the eligible compact states, Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming. The volume of radioactive waste that is projected to be generated within this six-state region within the next 20 years is quite small in comparison with the volumes that will be produced in other regions with a heavy concentration of nuclear power reactors or other nuclear industry.

Several recently published reports have concluded that a small disposal facility cannot be operated without charging an exorbitant disposal fee for its services. This study concludes that there are measures that may be taken to keep invested capital and operating expenses at a minimum, enabling the site operator to make a reasonable profit on the investment while charging disposal rates comparable with those of existing commercial facilities.

This study also examines several low-level radioactive waste management techniques to consider the pros and cons of their application in the Rocky Mountain region. Those techniques include shallow land burial, greater confinement disposal, near surface facilities, abandoned mines, incineration and other volume reduction techniques, temporary storage for decay, and biological waste treatment options. Special handling needs for the low-level waste categories established by the U.S. Nuclear Regulatory Commission in 10 CFR 61 are also explored.

2. SUMMARY

Several studies have concluded that, to be economically feasible, a low-level waste disposal facility must receive a much greater volume of waste than will be generated in the Rocky Mountain Compact region. This study does not claim to have any "secret" waste management techniques that will drastically reduce disposal costs. However, it does conclude that a low-level waste disposal facility can be developed and operated with lower capital and operating costs than estimated by previous studies. Thus, less money would be expended and costs could be recovered on a smaller volume of waste.

This study proposes an approach of performing a cash flow analysis on a year-by-year basis, whereby the rate of return in invested capital can be calculated to determine if the waste facility is a sound investment. The combined effects of taxes, depreciation, inflation, rate of return, waste volume charges, operating costs, capital investment and closure costs are all factored into the calculation, using standard engineering economic analysis.

The study makes an annual cash flow analysis over a 20-year life of the facility to determine the unit disposal charges and surcharges that would be required for a company to receive a fair rate of return on its invested capital. Four different rates of return are evaluated (12, 15, 20, and 30 percent) at four different inflation rates (6, 9, 12, and 15 percent). For tax purposes, a conservative straight line depreciation schedule is used in calculating the rate of return from a cash flow analysis; an accelerated depreciation schedule would produce a more rapid capital recovery.

The four different rates of return and four different inflation rates are applied to three different operating plans: full-time site operation, full-time operation in which the disposal trenches are excavated by a contractor and part-time operation. The study applies all possible combinations of the variables to three different low-level waste volumes: assuming a total volume of 3,600,000 ft^3 disposed over 20 years (106,000 ft^3 the first year), assuming 2,400,000 ft^3 over 20 years (72,000 ft^3 the first year) and assuming 1,300,000 ft^3 over 20 years (38,000 ft^3 the first year). A summary of the highest and lowest cost-combinations of these variables, given for the year 1982 is shown in Table 2-1.

As a point of reference, the base disposal charge for the Barnwell low-level waste facility is $13.20 per cubic foot. For the lowest cost-combination—part-time operation with a high volume of waste—all disposal charges except one would be lower than Barnwell's base cost. However, for the highest cost-combination—full-time operation with a low volume of waste—even the lowest disposal charge is 25 percent more than Barnwell's base cost. Chapter six provides the full tables of all permutations of these variables in 1982 dollars.

In its consideration of alternative low-level waste management options, the study concludes that:

- The most viable low-level waste disposal option for the Rocky Mountain region is a shallow-land burial site having a minimum of special equipment and facilities.

- Second-hand heavy equipment should be used wherever possible because of the very low utilization of the equipment for the disposal operations.

- Volume reduction techniques such as incineration or compaction would probably result in a net increase in overall waste management cost.

- A part-time facility would have a much greater cost-saving effect than a full-time facility that reduced its heavy equipment costs by contracting out for the excavation of its burial pits.

- An operator's real rates of return have a much greater impact on disposal charges than do the modes of operation considered in this study.

- The rates charged by a low volume shallow land burial facility can be made competitive with the rates currently charged by the existing commercial burial facilitities.

Table 2-1
Estimated Rocky Mountain LLW Disposal Charges[1]
1982 Dollars

Inflation Rate %	Nominal Rate of Return %	Real Rate of Return %	High Volume Part-Time[2] $/ft^3	Low Volume Full-Time[3] $/ft^3
6	12	6	5.36	20.10
9	12	3	4.39	16.81
12	12	—	NA[4]	NA
15	12	—	NA	NA
6	15	9	6.44	23.69
9	15	6	5.25	19.65
12	15	3	4.32	16.45
15	15	—	NA	NA
6	20	14	8.64	30.85
9	20	11	7.03	25.52
12	20	8	5.74	21.21
15	20	5	4.73	17.77
6	30	24	14.31	49.02
9	30	21	11.85	41.11
12	30	18	9.79	34.42
15	30	15	8.08	28.80

1. As a point of reference, as of February 5, 1983 the Barnwell low-level waste disposal facility was collecting a base charge of $13.20/ft^3.
2. Alternative/Case 3A
3. Alternative/Case 1C
4. Not Applicable. Wherever this term is used, the rate of return minus the inflation rate results in zero or a negative real rate of return; thus no facility would be built under such circumstances.

Attachment C
Testimony to the Senate Committee on the Judiciary
Leonard C. Slosky
January 12, 1984

LOW-LEVEL RADIOACTIVE WASTE COMPACT CONSENT LANGUAGE
Slosky 10/26

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled,

Section 1. In accordance with Section 4(aX2) of the Low-Level Radioactive Waste Policy Act (P.L. 96-573), the consent of Congress hereby is given to the States of _____, _____, _____ and those states which in the future may be added pursuant to the compact to enter into the _____ compact. Such compact is substantially as follows:

[Text of the _____ Compact]

Section 2. The Congress finds that the compact consented to herein is in furtherance of the policy contained in section 4(aX1) of the Low-Level Radioactive Waste Policy Act (P.L. 96-573) and of the intent of section 274b of the Atomic Energy Act of 1954.

Section 3. The consent given in Section 1 of this Act is expressely conditioned on the following:

(1) All regional disposal facilities shall accept waste material containing transuranic elements with contamination levels not exceeding the limits as defined in 10CFR61.55 as of December 27, 1982, so long as such waste material, but for its transuranic content would otherwise be acceptable for disposal at regional facilities.

(2) All regional disposal facilities established under this compact shall accept low level waste generated by the United States or its agencies, (hereinafter "federal waste") except that, regional facilities shall not be obligated to, but may, accept:

(i) Federal waste generated as a result of atomic energy defense activities of the Secretary of Energy, its agents, successor, or assigns or federal research and development activities of the Secretary of Energy, its agents, successor, or assigns;

(ii) Federal waste generated as a result of the research, development, testing, or production of nuclear weapons;

(iii) Federal waste generated outside the region.

Section 4. All federal waste disposed of at regional facilities shall be subject to the same conditions, regulations, requirements, taxes, and surcharges imposed by the commission/board or the party states in the same manner and to the same extent as any nonfederal waste.

Section 5. Nothing in this Act shall be construed to empower any state or states, either individually or collectively, to:

(1) Inspect security areas or operations at the site of generation of such wastes, except as may be provided by federal statute or agreement, or

(2) Require indemnification beyond the provisions of the Federal Tort Claims Act.

Section 6. As part of the Congressional five-year review of the compact, the Secretary of Energy will, based on consultations with the regional compacts, states, disposal site operators, principal low-level waste generators and transporters, provide Congress with a comprehensive report on the operation of the national system for management and disposal of low-level waste including site usage by Federal agencies, and projections of anticipated usage of disposal sites by all generators.

Section 7. Nothing in this Act shall be construed to limit the applicability of any act of Congress or to diminish or otherwise impair the jurisdiction of any Federal agency, including but not limited to the regulatory responsibility of the U.S. Nuclear Regulatory Commission or the Department of Transportation. In order that this compact may be given full effect, the Nuclear Regulatory Commission and the Department of Energy shall consult and cooperate with the _____compact commission/board and the states that are parties to this compact in carrying out this Act.

Section 8. The right of Congress to alter, amend, or repeal this Act every five years is expressly reserved.

Attachment D
Testimony to the Senate Committee on the Judiciary
Leonard C. Slosky
January 12, 1984

RESOLUTION NUMBER 2 OF THE ROCKY MOUNTAIN LOW-LEVEL RADIOACTIVE WASTE BOARD

WHEREAS, the United States Nuclear Regulatory Commission ("NRC") is concerned that the use of the term "management" in the Rocky Mountain Low Level Radioactive Waste Compact ("Compact") may permit the Rocky Mountain Low Level Radioactive Waste Board ("Board") to establish regional health, safety or environmental regulatory functions; and

WHEREAS, the Low-Level Radioactive Waste Policy Act, Public Law 96-573 states that "low-level radioactive waste can be most safely managed on a regional basis"; and

WHEREAS, the only regional regulatory authority contained in the Compact concerns the Board's approval of regional facilities solely on economic criteria which are outside the perview of the Atomic Energy Act and the NRC (under the Compact, all health and safety authorities continue to be vested in the individual states and/or the NRC); and

WHEREAS, the NRC is concerned that the Compact's restriction on export of waste from the region could be viewed as a burden on interstate commerce; and

WHEREAS, the Compact contains a provision allowing the Board to authorize the export of waste from the region; and

WHEREAS, the Board finds that the restriction on export of waste from the region is necessary to assure the economic viability of the region's facilities and can be constitutionally authorized by the United States Congress in consenting to the Compact; and

WHEREAS, the NRC is concerned that the Board or states party to the Compact may be authorized by the Compact to inspect NRC licensees or

promulgate packaging and transportation standards which may be inconsistent with federal law; and

WHEREAS, the Compact does not provide the Board or the states party to the Compact with any regulatory authority over the packaging or transportation of low-level radioactive wastes not already authorized under state or federal laws.

IT IS HEREBY RESOLVED THAT:

1. The Board will not establish any regional health, safety or environmental regulatory functions.

2. The Board will not seek to restrict the export of waste from the region unless and until the Board is authorized to do so by the United States Congress.

3. The Atomic Energy Act of 1954 prevents both the Board and the states party to the Compact from inspecting NRC licensees except as may be provided under section 274i of the Act. The Board will not adopt packaging or transportation requirements which would be inconsistent with federal provisions.

This resolution is unanimously adopted by the representatives of the States of Colorado, Nevada, New Mexico and Wyoming on August 5, 1983.

For the State of Colorado:

William Hendee

For the State of Nevada:

S. Barton Jacka

For the State of New Mexico:

Robert McNeill

For the State of Wyoming:

John Doerges

Senator SIMPSON. You bet. Well, let's have this panel consisting of four persons, you might just come forward here, I think we have four seats there, and proceed in the order in which you are listed in this agenda.

We have G. Wayne Kerr, Director of the Office of State Programs, U.S. Nuclear Regulatory Commission; J. P. Hamric, Director of the Nuclear Fuel Cycle and Waste Management Division of the Idaho Operations Office, U.S. Department of Energy; Lt. Col. Peter S. Daley, Director of the Environmental Policies of the U.S. Department of Defense; and Glenn Sjoblom, Director of the Office of Radiation Programs of the U.S. Environmental Protection Agency.

So, why don't you just proceed in that order. Thank you.

Mr. KERR. Thank you, Mr. Chairman.

Senator SIMPSON. Mr. Kerr.

STATEMENT OF G. W. KERR, DIRECTOR, OFFICE OF STATE PROGRAMS, U.S. NUCLEAR REGULATORY COMMISSION

Mr. KERR. I am pleased to be here today to testify on our comments pertaining to the Rocky Mountain Low-Level Radioactive Waste Compact, S. 1991, and the questions in the committee's invitation letter of December 7, 1983. I request my full statement be included in the record.

Senator SIMPSON. Without objection.

CONSENT CONDITIONS

Mr. KERR. The Commission recommends that, prior to ratification, Congress incorporate consent language into S. 1991 regarding scope of the compact, export and import restrictions, the definition of low-level waste, and the possibility of conflicting regulations on packaging and transportation along with language found in Resolutions 1 and 2 as adopted by the Rocky Mountain Board on August 5, 1983, which leaves intact the primacy of existing Federal law and Federal regulatory jurisdiction.

Addressing the questions in the invitation letter, the definition of low-level radioactive waste as given in article II(g) comports with the definition of Public Law 96–573, and NRC regulations with certain exceptions. Resolution 1 approved by the Rocky Mountain Board addresses the limit for transuranic nuclides by raising it from 10 to 100 nanocuries per gram. Conditional consent language, together with the resolution, would resolve this inconsistency.

ECONOMIC STUDIES

The staff has no particular expertise in addressing the economics of a site. My prepared statement notes some studies which have been performed by Colorado and by the Department of Energy which address this matter. According to the Colorado report, without Arizona as a party State of the Rocky Mountain Compact, the unit cost of disposal may double because of the large amount of low-level radioactive waste that Arizona is forecast to produce would not be disposed of in the Rocky Mountain site.

Resolution 2 as approved by the board addresses concerns that party states might have to adhere to packaging and transportation regulations of the host State that could conflict with the authority of NRC and the U.S. Department of Transportation. This, combined with consent language would adequately address this matter.

COOPERATION WITH STATES

NRC expects to cooperate with both agreement and nonagreement States, particularly when considering changes to 10 CFR Part 61, the NRC's regulation for land disposal of low-level radioactive waste. Further we expect the NRC's regional State liaison officer to continue to attend meetings of the Rocky Mountain board and provide assistance to the States as requested. Consequently, because of the frequent communications with the party States, we believe that concerns that arise during the implementation of this compact can be resolved expeditiously and to the satisfaction of all parties.

LICENSING PROCESS

The specific steps to be taken to obtain a license for a selected site may vary according to whether the NBC or an agreement State will be the regulatory authority. In the NRC process, after a proposed disposal site has been selected, the applicant begins a detailed investigation of the proposed site, and initiates a preoperational monitoring program. The applicant prepares an application for the land disposal facility following the Part 61 rule and prepares an environmental report. Licensing activities begin when the applicant files the application, including a notice of receipt in the Federal Register and an opportunity for hearing. The regulatory review period follows, the applicant responds to information requests from NRC, and the application and environmental report are updated, if necessary.

Construction may not begin until a decision is made to issue the license. Based upon the application, the environmental report, and any additional information, the Commission prepares and publishes a draft environmental impact statement and publishes it for public comment, and the staff prepares a final environmental impact statement. If hearings are requested, an atomic safety and licensing board is appointed.

Upon resolution of the hearings, reviews, and appeals, the Director of the NRC Office of Nuclear Material Safety and Safeguards takes final action to issue the license in accordance with the rule and any conditions rendered by the licensing or appeals boards or the Commission. If the ownership of the site land has not been transferred to the State or Federal government, transfer would now take place. Depending on the characteristics of the site and the complexity of the NRC review, our process could take from 2 to 4 years.

NEED FOR EPA STANDARDS

Given the detailed requirements in 10 CFR Part 61 for the protection of public health and safety from the radiological risks associated with low-level waste disposal, we question whether an EPA standard would add materially to the public health and safety. The regulatory

uncertainty of possible EPA standards may have a negative effect on site selection, the development of compacts, and the assumption of State responsibilities for disposal under the Low-Level Waste Policy Act of 1980.

The legal defensibility of Part 61 is moot because the time to petition for review of the rule has passed. Moreover, since there is no statutory obligation for EPA to promulgate a general standard covering materials regulated under Part 61, the existence of any general standard set by EPA is not a legal prerequisite to the validity of Part 61.

Nothing in the Resource Conversation and Recovery Act applies to any activity or substance subject to the Atomic Energy Act except to the extent that RCRA regulations are not inconsistent with the requirements of the Atomic Energy Act. Thus, if RCRA regulations are not inconsistent with the Commission's regulations, RCRA may apply to hazardous waste disposed of in a low-level radioactive waste disposal site in conjunction with exempted source, special nuclear, or byproduct material. RCRA and Part 61 requirements are incompatible in some ways. If you take just one example, we do not believe that the RCRA regulations on waste chemical analysis, inspection, and sampling should be generally applied to low-level waste disposal. For low-level waste, we believe that waste characterization activities should generally be performed by the waste generator. Such waste characterization activities must already be carried out by waste generators and to require disposal facility operators to perform detailed confirmation analysis would increase impact to site personnel.

Thank you, Mr. Chairman. I would be pleased to answer any questions you may have.

[Material follows:]

PREPARED TESTIMONY

SUBMITTED BY

UNITED STATES NUCLEAR REGULATORY COMMISSION

PRESENTED BY

G. W. KERR, DIRECTOR

OFFICE OF STATE PROGRAMS

Mr. Chairman and members of the Committee, I am pleased to be here today to present the comments of the Nuclear Regulatory Commission pertaining to S. 1991, the bill which would provide Congressional consent to the Rocky Mountain Low-Level Radioactive Waste Compact.

The Rocky Mountain Low-Level Radioactive Waste Compact was finalized in early 1982. The Compact has since been enacted into law by four of the six eligible states - Colorado, Wyoming, New Mexico and Nevada. Under the terms of the Compact, the States of Arizona and Utah are also eligible to become parties to the Compact. Other states may be made eligible by unanimous consent of the Rocky Mountain Low-Level Radioactive Waste Board.

The NRC has several concerns with the Compact as submitted. These relate to the scope of the Compact, restrictions on exports and imports contained in the Compact, the definitions of low-level radioactive waste and transuranic contamination, and the potential for conflict with NRC and DOT packaging and transportation regulations.

The Rocky Mountain Board has attempted to address these concerns by adopting two resolutions (Attachments 1 and 2) and by proposing conditional consent language to Congress. The Commission notes that the two resolutions are not binding on future Boards and believes that similar language ought to be incorporated into the consent legislation itself in order to fully resolve its concerns.

I would now like to discuss briefly each of the Commission's concerns with the Compact as submitted.

Scope of the Compact

The Commission's concerns with the scope of the Compact are similar to those already expressed with respect to other compacts. As with the other compacts submitted to Congress, the Rocky Mountain Compact goes beyond disposal into almost all aspects of low-level radioactive waste management. The Low-Level Radioactive Waste Policy Act of 1980 confers authority on the states to enter into compacts with respect to the disposal of low-level radioactive wastes. It does not, in our opinion, confer additional authority to the states with respect to generation, transportation or any other activity that does not constitute "disposal".

The Commission is also concerned that the Compact could be interpreted to permit the Rocky Mountain Board to assume health, safety, or environmental regulatory functions that would be duplicative of the NRC or the Agreement States. On August 5, 1983, the Board attempted to address this concern by adopting unanimously a resolution resolving that, "The Board will not establish any regional health, safety or environmental regulatory functions."

The same resolution also acknowledged that "the only regional regulatory authority contained in the Compact concerns the Board's approval of regional facilities solely on economic criteria which are outside the perview of the Atomic Energy Act and the NRC (under the Compact, all health and safety authorities continue to be vested in the individual states and/or the NRC)."

Import Restrictions

Article VII(c) of the Compact, when read together with the definitions

of "facility" and "management" contained in Article II, would seem to restrict the importation of out-of-region waste for collection, consolidation, storage, treatment and incineration. This is a broader restriction than is allowed by Public Law 96-573, which confers authority to restrict import for "disposal" only, and may place an undue burden on interstate commerce.

The Commission would note that careful adherence to the waste management system currently in place in Section 20.311 of NRC's regulations should prevent the unauthorized disposal of out-of-region waste in a regional disposal facility and alleviate any Compact state concerns arising from importation of wastes for purposes other than disposal.

Export Restrictions

The Compact prohibits the export of low-level radioactive waste for management outside the region without authorization by the Rocky Mountain Board. This provision does not conform to Public Law 96-573, which does not authorize restrictions on exports, and could place an undue burden on interstate commerce.

The purpose of this restriction, according to the Board, is to assure the economic viability of the regional facility. It may be useful to allow the export ban to remain in the compact. However, we believe that provision needs to be made for an exception to such a ban for health and safety reasons.

Definitions of Low-Level Radioactive Waste and Transuranic Contamination

The definition of low-level radioactive waste as given in Article II(g) comports with the definition in Public Law 96-573 and NRC regulations with the following exceptions.

First, the Compact definition specifically excludes "waste material containing transuranic elements with contamination levels greater than ten nanocuries per gram of waste material." This limitation conflicts with the current NRC definition contained in 10 CFR 61.55(a)(3), Table 1, which prescribes an upper limit on transuranic contamination of low-level waste of 100 nanocuries per gram.

The Rocky Mountain Board has attempted to address this inconsistency by adopting a resolution raising the limit for transuranic nuclides from 10 to 100 nanocuries per gram of waste material. It has also proposed Congressional consent language which conditions Congressional consent of the Compact on the assurance that the Rocky Mountain regional facilities will use the current NRC definition for low-level wastes contaminated with transuranic elements. The NRC believes that this conditional consent language, together with the Board resolution, would adequately resolve this inconsistency.

Similarly, the Board has taken action by resolution and in proposing Congressional consent language to bring the definition of Federal waste in Article II(g)(i) of the Compact into conformity with that contained in Public Law 96-573.

Finally, the Compact definition in Article II(g)(v) of "wastes from mining, milling, smelting, or similar processing of ores and mineral-bearing material primarily for minerals other than radium" differs significantly from the definitions in Public Law 96-573 and NRC regulations. Nonetheless, the NRC has no objection to this part of the definition, which addresses a unique regional problem.

Packaging and Transportation

The NRC has expressed its concerns to the party states that the Compact may be construed to authorize the Rocky Mountain Board or states party

to the Compact to inspect NRC licensees or promulgate packaging or transportation requirements which may be inconsistent with federal law.

In an effort to alleviate these concerns, the Rocky Mountain Board has adopted a resolution acknowledging that both the Board and the states party to the Compact are prevented by law from inspecting NRC licensees except as may be provided under section 274i of the Atomic Energy Act of 1954, as amended, and resolving that the Board "will not adopt packaging or transportation requirements which would be inconsistent with federal provisions."

Commission Recommendations

The Commission believes that its regulatory and statutory concerns with respect to the scope of the Compact, export and import restrictions, the definitions of low-level waste and the possibility of conflicting regulations on packaging and transportation would be addressed if the Congressional consent language were to incorporate a detailed clause leaving intact the primacy of existing federal law and federal regulatory jurisdiction along with language found in Resolutions 1 and 2, as adopted by the Rocky Mountain Low-Level Waste Board on August 5, 1983. The Commission recommends that Congress incorporate such consent language into S. 1991 prior to ratification of the Rocky Mountain Compact.

Conclusion

The Rocky Mountain states moved quickly to respond to the major challenges of the Low-Level Radioactive Waste Policy Act of 1980. The states and their negotiators who developed this compact are to be commended. Similar interstate compacts have already been submitted to Congress for the Northwest, Southeast and Central regions. The granting of Congressional consent to these compacts will be an important

milestone toward the goal of complete implementation of the Low-Level Radioactive Waste Policy Act of 1980.

Much remains to be done, however. The NRC is hopeful that the states in the Midwest and Northeast will continue their progress toward regional compacts for those parts of the nation and that all states will have achieved workable solutions to the problem of low-level radioactive waste disposal by the statutory deadline.

Thank you for providing this opportunity to speak to you today. Our detailed responses to the questions posed in the Committee's letter of December 7, 1983 are attached to my testimony (Attachment 3). I would be pleased to answer any questions you may have.

Attachment 1

RESOLUTION NUMBER 2 OF THE ROCKY MOUNTAIN LOW-LEVEL RADIOACTIVE WASTE BOARD

WHEREAS, the United States Nuclear Regulatory Commission ("NRC") is concerned that the use of the term "management" in the Rocky Mountain Low Level Radioactive Waste Compact ("Compact") may permit the Rocky Mountain Low Level Radioactive Waste Board ("Board") to establish regional health, safety or environmental regulatory functions; and

WHEREAS, the Low-Level Radioactive Waste Policy Act, Public Law 96-573 states that "low-level radioactive waste can be most safely managed on a regional basis"; and

WHEREAS, the only regional regulatory authority contained in the Compact concerns the Board's approval of regional facilities solely on economic criteria which are outside the perview of the Atomic Energy Act and the NRC (under the Compact, all health and safety authorities continue to be vested in the individual states and/or the NRC); and

WHEREAS, the NRC is concerned that the Compact's restriction on export of waste from the region could be viewed as a burden on interstate commerce; and

WHEREAS, the Compact contains a provision allowing the Board to authorize the export of waste from the region; and

WHEREAS, the Board finds that the restriction on export of waste from the region is necessary to assure the economic viability of the region's facilities and can be constitutionally authorized by the United States Congress in consenting to the Compact; and

WHEREAS, the NRC is concerned that the Board or states party to the Compact may be authorized by the Compact to inspect NRC licensees or promulgate packaging and transportation standards which may be inconsistent with federal law; and

WHEREAS, the Compact does not provide the Board or the states party

to the Compact with any regulatory authority over the packaging or transportation of low-level radioactive wastes not already authorized under state or federal laws.

IT IS HEREBY RESOLVED THAT:

1. The Board will not establish any regional health, safety or environmental regulatory functions.

2. The Board will not seek to restrict the export of waste from the region unless and until the Board is authorized to do so by the United States Congress.

3. The Atomic Energy Act of 1954 prevents both the Board and the states party to the Compact from inspecting NRC licensees except as may be provided under section 274i of the Act. The Board will not adopt packaging or transportation requirements which would be inconsistent with federal provisions.

This resolution is unanimously adopted by the representatives of the States of Colorado, Nevada, New Mexico and Wyoming on August 5, 1983.

For the State of Colorado:

William Hendee

For the State of Nevada:

S. Barton Jacka

For the State of New Mexico:

Robert McNeill

For the State of Wyoming:

John Doerges

Attachment 2

RESOLUTION NUMBER 1 OF THE ROCKY MOUNTAIN LOW-LEVEL RADIOACTIVE WASTE BOARD

WHEREAS, Article 7 of the Rocky Mountain Low-Level Radioactive Waste Compact ("Compact") authorizes the Rocky Mountain Low-Level Radioactive Waste Board ("Board") to allow the management of radioactive wastes other than low level waste as defined in Article 2 of the Compact; and

WHEREAS, the Board finds that the management of transuranic wastes with contamination levels not exceeding 100 nanocuries per gram of waste material will not significantly affect the available capacity and projected life of any regional facilities to be built in the region; and

WHEREAS, the Board finds that the management in the region of transuranic wastes with contamination levels not exceeding 100 nanocuries per gram of waste material will not significantly affect the economic viability of any regional facilities; and

WHEREAS, the Board finds that regional facilities have no obligation to dispose of radioactive waste generated by atomic energy defense activities of the Secretary of the United States Department of Energy, its agents, successors or assigns pursuant to Article 7 of the Compact or the Low-Level Radioactive Waste Policy Act, Public Law 96-573; and

WHEREAS, the Board finds that the disposal at regional facilities of radioactive waste which would otherwise constitute "low-level waste" as defined in the Compact except that the waste is generated by the federal government (hereinafter "federal waste") other than that produced by atomic energy defense activities of the United States Department of Energy, its agents, successors or assigns, will not unacceptably affect the available capacity and projected life of any regional facilities to be built in the region and will not adversely affect the economic viability of any regional facilities so long as appropriate limits are placed on the quantity of that waste disposed at regional facilities.

IT IS HEREBY RESOLVED THAT:

1. Waste material containing transuranic elements with contamination levels not exceeding 100 nanocuries per gram of waste material may be disposed of at regional facilities.

2. "Federal waste" may be disposed of at regional facilities subject to the following conditions and restrictions:

(a) No federal waste generated at an atomic energy defense installation or institution of any type owned or operated by the United States Department of Energy, its agents, successor, or assigns and no federal waste resulting from the research, development or production of atomic weapons may be disposed of at any regional facility without the consent of the Board and the host state as provided in the Compact.

(b) It is the intent of Congress that federal activities to which this Compact applies shall be subject to the same regulations, requirements, and service charges by the Compact and/or its states, in the same manner and to the same extent as any non-federal entity.

(c) In any calendar year, the total quantity (by volume) of federal waste disposed of at regional facility(s) shall not exceed 5% of the total amount of waste disposed of in the region without the consent of the Board and the host state as provided in the Compact.

(d) In addition to the restrictions and conditions contained in paragraphs (a) through (c) above, no federal waste, except federal waste generated within the region, may be disposed of at any regional facility without the consent of the Board and the host state as provided in the Compact.

This resolution is unanimously adopted by the representatives of the States of Colorado, Nevada, New Mexico and Wyoming on August 5, 1983.

For the State of Colorado:

William Hendee

For the State of Nevada:

S. Barton Jacka

For the State of New Mexico:

Robert McNeill

For the State of Wyoming:

John Doerges

Attachment 3

Answers to questions posed by the Committee on the Judiciary, U.S. Senate regarding the Rocky Mountain Low-Level Radioactive Waste Compact (S. 1991) for the hearing in Cheyenne, Wyoming, January 12, 1984.

QUESTION 1a. Is the Rocky Mountain Low-Level Radioactive Waste Compact, in its present form, consistent with the terms and conditions of the Low-Level Radioactive Waste Policy Act?

ANSWER.

The proposed compact for the Rocky Mountain States (S. 1991) is generally consistent with the terms and conditions of the Low-Level Radioactive Waste Policy Act with the following exceptions:

A. Import Restrictions

Article VII(c) of the Compact, when read together with the definitions of "facility" and "management" contained in Article II, would seem to restrict the importation of out-of-region waste for collection, consolidation, storage, treatment and incineration. This is a broader restriction than is allowed by Public Law 96-573, which confers authority to restrict import for "disposal" only, and may place an undue burden on interstate commerce.

The Commission would note that careful adherence to the waste management system currently in place in Section 20.311 of NRC's regulations should prevent the unauthorized disposal of out-of-region waste in a regional disposal facility and alleviate any Compact state concerns arising from importation of wastes for purposes other than disposal.

B. Export Restrictions

The Compact prohibits the export of low-level radioactive waste for management outside the region without authorization by the Rocky Mountain Board. This provision does not conform to Public Law 96-573, which does not authorize restrictions on exports, and could place an undue burden on interstate commerce.

The purpose of this restriction, according to the Board, is to assure the economic viability of the regional facility. It may be useful to allow the export ban to remain in the compact. However, we believe that provision needs to be made for an exception to such a ban for health and safety reasons.

QUESTION 1b. What additional changes, if any, would you recommend prior to ratification of this compact by the Congress? If such changes are necessary, what approach, in your judgment, will best serve to accomplish this end in a fashion that will withstand future legal challenges while at the same time minimizing or eliminating the need for each compact state to readopt the compact.

ANSWER.

The Commission recommends that Congress incorporate consent language addressing NRC regulatory and statutory concerns prior to ratification of the Rocky Mountain Compact S. 1991. If the Congressional consent language incorporates a detailed clause leaving intact the primacy of existing Federal Law and Federal regulatory jurisdiction along with language found in Resolutions 1* and 2* as passed by the Rocky Mountain Low-Level Waste Board, the NRC is supportive of passage.

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* Addresses NRC regulatory concerns with scope of the compact; export and import restrictions; definition of low-level waste; transuranic contamination; and NRC and DOT packaging and transportation regulations.

QUESTION 2. Based upon current and projected rates of generation of low-level waste, is it reasonable to expect that the Rocky Mountain region will be able to design, construct, license, and operate a low-level waste disposal facility that satisfies all applicable health and safety requirements and, at the same time, is economical to operate?

ANSWER.

The U.S. Nuclear Regulatory Commission (NRC) has not conducted any studies regarding the feasibility of economical site operations. However, the NRC Staff should like to note that under a grant from the U. S. Department of Energy, Colorado contracted with Ford, Bacon and Davis, Inc., for a study to evaluate the economic feasibility of operating a low-level radioactive waste disposal facility for the six-state Rocky Mountain Compact and to assess the management options and the economic impacts as they relate to the specific circumstances in the Rocky Mountain Region. Colorado reported on the study in "Economics of a Low-Level Radioactive Waste Management Facility for the Rocky Mountain Region," Mary Whitman et al, Office of the Governor, DOE/ID/12371-6, September 1983. The report concluded that there are measures that may be taken to keep invested capital and operating expenses at a minimum, enabling the site operator to make a reasonable profit on the investment while charging disposal rates comparable with those of existing commercial facilities. Although the NRC staff has not conducted a detailed review of this report, the results of this report appear to indicate that cost savings of approximately a factor of two or more might be achieved compared to the conclusions of the U. S. Department of Energy funded economic analysis prepared by EG&G Idaho, Inc. that is widely available, "An Analysis of Low-Level Waste Disposal Facility and Transportation Costs," National Low-Level Radioactive Waste Management Program, DOE/LLW-6Td, April 1983. The Rocky Mountain report provides economic estimates for relatively small disposal sites whereas the EG&G Idaho Inc. report makes economic estimates for relatively large disposal sites. The reports can be compared only where they overlap. Both of these reports make the assumption that the sites satisfy all applicable health and safety requirements of the NRC and/or Agreement States. They both show that the larger the volume of low-level radioactive waste disposed, the smaller the unit disposal costs. According to the Colorado report, without Arizona as a party State of the Rocky Mountain Compact, the unit cost of disposal may double because the large amount of low-level radioactive waste that Arizona is forecast to produce would not be disposed of in the Rocky Mountain site.

QUESTION 3. What provisions have been included in this compact to ensure that the uniform national requirements governing the packaging and transportation of low-level waste will be enforced in a consistent fashion throughout the region?

ANSWER.

Articles III(f)(i) and III(f)(v) may require adherence by party States to packaging and transportation regulations of the host State that could conflict with the authority of NRC and the U.S. Department of Transportation. These concerns can be removed through Congressional consent language. National requirements governing the packaging and transportation of low-level radioactive waste should be enforced in a consistent fashion throughout the Rocky Mountain Compact Region.

QUESTION 4a. To what extent, if any, does the membership of this compact -- consisting, as it does, of both agreement and non-agreement States -- pose the need for additional coordination in the licensing of a disposal facility and in the regulation of packaging and transportation of low-level waste within the region?

ANSWER.

If the state is a non-Agreement State the NRC is the regulatory authority for the licensing of a disposal facility and in the regulation of packaging and transportation of low-level waste within the region. If the state is an Agreement State, the State is the regulatory authority and its program must be compatible with that of the NRC. NRC has always maintained a close rela-

tionship with the Agreement States in the area of developing NRC regulations. NRC has offered the non-Agreement States an opportunity for the same kind of relationship when considering changes to 10 CFR 61, the NRC's regulation for land disposal of low-level radioactive waste.

With regard to the regulation of packaging and transportation of low-level waste within the region, and the impacts of Articles III(f)(i) and III(f)(v) that may require adherence by party States to regulations that could conflict with the authority of NRC and the U.S. Department of Transportation, the NRC has the authority to enter into Memoranda of Understanding (MOU) under Section 274i of the Atomic Energy Act of 1954, as amended. On-site inspection of waste packaging by certain NRC licensees can be permitted under an MOU between NRC and each of the States in the compact.

NRC has published a Federal Register Notice (48 FR 49562) with a proposed MOU by which States can inspect certain NRC licensees' activities related to packaging and transportation of low-level waste destined for disposal at a commercial low-level waste site. It is limited to inspection of packaging, packaging procedures and transport vehicles. The inspection would be to determine compliance with NRC rules and regulations. The concept of the agreement under 274i is directly responsive to a need perceived by the host states for a greater frequency of inspection of waste shipments.

QUESTION 4b. What steps have been or will be taken by the NRC to ensure that concerns of both agreement and non-agreement States that may arise in the course of implementing this compact can be resolved expeditiously and to the satisfaction of all parties.

ANSWER.

The NRC Regional State Liaison Officer continues to attend Board meetings of the Rocky Mountain Low-Level Radioactive Waste Board and provides assistance to the States as requested. Consequently, because of the constant communications with the party States, NRC staff believes that concerns that arise during the implementation of this compact can be resolved expeditiously and to the satisfaction of all parties without additional coordination effort.

QUESTION 5. Upon identification of a potential site by the Rocky Mountain region, what steps must be taken in order to obtain a license for that site? How long do you expect the licensing process to take?

ANSWER.

The specific steps to be taken to obtain a license for a selected site may vary according to whether the NRC or an Agreement State will be the licensing authority. We will describe the major steps in the NRC licensing process. These steps are described in more detail on pages 5-46 through 5-48, NUREG-0945, the Final Environmental Impact Statement for NRC's 10 CFR Part 61 licensing rule for land disposal of low-level radioactive wastes.

1. After a proposed disposal site has been identified, the applicant begins a detailed investigation of the geology and hydrology of the proposed disposal site. The applicant also initiates a preoperational program to monitor surface and ground water transport.

2. The applicant prepares an application for the land disposal facility following Subpart B of the Part 61 rule. The applicant also prepares an environmental report.

3. Licensing activities begin when the applicant files the application. Prior to docketing, the application is reviewed for completeness and acceptability, and a notice of receipt of the tendered application is published in the Federal Register. The Commission notifies State, local, and tribal officials and begins to coordinate with these officials. Once docketed, the application is again noticed in the Federal Register and the application and accompanying environmental report is widely distributed. An opportunity for interested parties to request a hearing is provided, and application fees are paid in accordance with 10 CFR Part 170.

4. The regulatory review period follows. The applicant continues any disposal site studies and the preoperational observation and monitoring program. The applicant also responds to information requests from NRC. The application and environmental report are updated if necessary. Construction may not begin until a decision is made to issue the license.

5. Based upon the application, environmental report, and any additional information, the Commission prepares a draft environmental impact statement (DEIS) and publishes it for public comment. Based upon public comments on the DEIS and any additional information, the staff prepares and publishes a final environmental impact statement (FEIS).

6. If hearings are requested, an Atomic Safety and Licensing Board (ASLB) is appointed. Hearings, if any, would be held in accordance with existing rules in 10 CFR Part 2. An Atomic Safety and Licensing Appeal Board, and/or the Commission may review the ASLB findings or the ASLB findings may be appealed to these next levels and to the courts.

7. Upon completion of the hearings and resolution of any outstanding issues or appeals, the Director of the NRC Office of Nuclear Material Safety and Safeguards takes final action to issue the license in accordance with the rule and any conditions rendered by the Licensing or Appeals Boards or the Commission. Pursuant to a Commission order 10 CFR 2.765, the Director of Nuclear Material Safety and Safeguards may not issue a license under Part 61 or any amendment to such a license which may significantly affect the health and safety of the public, until expressly authorized to do so by the Commission. A notice is published in the Federal Register.

8. If the ownership of the site land has not been transferred to the State or Federal government, transfer would now take place. The site must be owned by the State or Federal government before the license can be issued.

NRC staff estimated in the FEIS on Part 61 that site selection and characterization would take one to two years, and the licensing process would take one to two years. Thus, depending on the characteristics of the site and the complexity of the NRC review, our process could take from two to four years. A protracted hearing would obviously extend this time estimate.

The time it takes to license a low-level radioactive waste disposal facility in Colorado is discussed in a report prepared by Mary Whitman, Office of the Governor, "Strategy and Plan for Siting and Licensing a Rocky Mountain Low-Level Radioactive Waste Facility," DOE/ID/12371-1, September 1983. The overall time from site selection through licensing is estimated to be four years and nine months. The Radioactive Materials License issued by the Colorado Department of Health is estimated to take two years and six months. If a Federal Environmental Impact Statement is required, the time for that is estimated at two years. According to the report, this action would be needed only if the site that is proposed is on Federal land. Colorado requires additional licenses, such as air emissions, subsurface disposal, special use and certificate of designation. All of the licensing activity is done concurrently. The longest one, the Radioactive Materials License, is the critical one in terms of time.

QUESTION 6. In the event that the Environmental Protection Agency should decide to proceed with the development of environmental radiation protection standards for low-level radioactive waste disposal, what impact will this have, in your judgment, on the implementation of the regional compact process, the development of regionally-distributed disposal sites, and the application of NRC's recently promulgated national licensing standards (10 CFR Part 61)? Based upon the record developed in support of the NRC's existing licensing standards, is there a need for an EPA standard to ensure that the public health and safety will be protected? Please explain. Are the requirements of 10 CFR Part 61 legally defensible?

ANSWER.

The Commission is concerned that EPA's proposal to develop a standard for the disposal of low-level waste creates a state of regulatory uncertainty which could slow the states' development of low-level radioactive waste disposal sites. EPA's proposed action presents the possibility of regulatory requirement inconsistent with those established by the NRC and, thus, a time consuming process to conform NRC's regulation to those standards. This potential for change and delay could deter states from entering into compacts and selecting disposal sites.

The Commission believes that its regulatory structure in Part 61 will provide reasonable assurance of public health and safety for low-level waste sites located in non-Agreement States. In Agreement States, low-level waste disposal regulations must be compatible with the NRC's and thus, provide essentially the same level of reasonable assurance of public health and safety. The NRC's regulations were developed after an extensive rule-making process and in cooperation with EPA. NRC staff consulted extensively with EPA staff to insure that potential public exposures expected from meeting these requirements at low-level waste disposal facilities would be consistent with EPA's anticipated standards. In a February 1983 letter to the General Accounting Office on these standards, EPA itself acknowledged that NRC's performance requirements for general public exposure were based on the "proper range of from 1 to 25 millirem per year" and that NRC's requirements "Should be compatible with an EPA standard in that range." Accordingly, if as we expect, EPA's standard would be compatible with NRC regulations, we question whether EPA's standard would add materially to the public health and safety.

Finally, the legal defensibility of Part 61 is moot because the time to petition for review of the rule has passed. Moreover, since there is no statutory obligation for EPA to promulgate a general standard covering materials regulated under Part 61, the existence of any general standard set by EPA is not a legal prerequisite to the validity of Part 61. However, because NRC rules would have to implement any EPA standard, EPA's promulgation of standards in conflict with Part 61 would present a serious problem of interagency coordination in NRC's regulating this activity and of public confusion and unnecessary cost in efforts to deal with conflicting or inconsistent regulations.

QUESTION 7. To what extent, if any, are the requirements of the Resource Conservation and Recovery Act (RCRA) applicable to disposal sites licensed pursuant to 10 CFR Part 61? Are the requirements of RCRA compatible with those of 10 CFR Part 61? If the requirements of RCRA are applicable to low-level waste disposal sites, please explain in detail those steps that will need to be taken by the NRC and by the licensees to comply with RCRA.

ANSWER.

Source, special nuclear, or byproduct material as defined by the Atomic Energy Act of 1954 are expressly excluded from the meaning of solid waste under the Resource Conservation and Recovery Act. Nothing in the RCRA applies to any activity or substance subject to the Atomic Energy Act except to the extent that RCRA regulations are not inconsistent with the requirements of the Atomic Energy Act. Thus, if RCRA regulations are not inconsistent with the Commission regulations, RCRA regulations may apply to hazardous wastes disposed of in a low-level radioactive waste disposal site in conjunction with exempted source, special nuclear, or byproduct material.

There are a number of differences in requirements between EPA and NRC waste disposal regulations which affect compliance by licensees or permittees. The differences are such that we believe it will be extremely difficult if not impossible for the two requirements to be complied with simultaneously. Since the two sets of requirements reflect differences in the types of processes generating the waste, as well as the expected physical and chemical characteristics of the waste, we do not believe that both sets of standards should be complied with simultaneously.

Almost all of the waste disposed into a low-level waste site, if it were not contaminated with radioactivity, could be safely disposed into a sanitary landfill. Part 61 regulations, as well as license conditions at existing operating disposal facilities, prohibit the disposal of wastes with chemically reactive or other characteristics that are generally used to identify hazardous wastes. Of the waste that contains both hazardous material and radioactive material licensed under the Atomic Energy Act, almost all consists of scintillation liquids generated as part of chemical and biological research activities by hospitals and research organizations. The wastes disposed into hazardous waste sites are much more chemically and physically reactive than low-level waste as well as being more difficult to characterize. These wastes may contain corrosive liquids, for example, that would be prohibited at a low-level waste site.

RCRA and Part 61 requirements are incompatible in a number of ways. For example, RCRA requires operators of disposal facilities to perform detailed confirmatory analyses of the chemical composition of waste. The NRC requires only waste generators to perform analysis of isotope content. Additional analysis by disposal operators would be redundant and lead to their unnecessary exposure to radiation.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

FEB 28 RECD

FEB 27 1984

The Honorable Alan K. Simpson
Committee on the Judiciary
United States Senate
Washington, DC 20510

Dear Senator Simpson:

In the January 12, 1984 Rocky Mountain Low-Level Radioactive Waste Compact field hearing you requested the U.S. Nuclear Regulatory Commission supplement its testimony with additional information for the record. The enclosed documents are in response to that request:

a. Addendum to written testimony for the record: "Discussion of Proposed Congressional Consent Language and Legislative History for the Pending Low-Level Radioactive Waste Interstate Compacts."

b. Response to the direct question, "Would the Compact Board and the individual states have the authority to impose civil penalties in the absence of these provisions, and are these two provisions consistent with the current law on federal/state responsibilities under the Atomic Energy Act?": Memorandum from Guy H. Cunningham, III, Executive Legal Director, to G. Wayne Kerr, Director Office of State Programs, January 25, 1984.

Sincerely,

Edward Jordan

Carlton Kammerer, Director
Office of Congressional Affairs.

Enclosure:
As stated

cc: Paul Guller

DISCUSSION OF PROPOSED CONGRESSIONAL CONSENT LANGUAGE AND LEGISLATIVE HISTORY FOR THE PENDING LOW-LEVEL RADIOACTIVE WASTE INTERSTATE COMPACTS

The Nuclear Regulatory Commission wishes to make several specific suggestions for Congressional consent language for each of the four pending bills to approve regional interstate compacts on low-level radioactive waste. We also mention several points which we think can better be made in committee reports than in the legislation itself. The consent language is set forth for each compact in the Attachment to this Enclosure. In drafting the proposed consent language, we have attempted to "construe" rather than to amend the compacts to avoid the impression that they have been significantly altered and that reratification may be necessary.

For all compacts except the Southeast, we propose a general section which assures that the existing scheme for Federal regulation of low-level waste remains intact.* Subsection (a) of this section preserves existing NRC and Agreement State authority, jurisdiction, and discretion. Subsection (b) states the converse, that the States and compact commissions are not authorized by the compacts to regulate in specified areas where the compacts have the greatest potential for conflict with NRC and Department of Transportation regulatory schemes. See Attachment, Rocky Mountain compact § 5, Northwest compact § 4, Central compact § 4.

We believe these sections are in accord with Congressional intentions. A number of State officials have also testified that it was not their intention to duplicate, change, or interfere with current Federal regulation. However, the compacts are themselves unclear in this regard and suggestions of increased state authority are sufficiently strong that clarifying consent language is desirable. Identical Congressional consent language addressing this problem for all the compacts would emphasize Congress's intention to preserve Federal authority and would help ensure that different compacts are treated similarly in this regard by the courts.

The Southeast compact adequately addresses these concerns. Articles 6(A)(1) and (2) accomplish the same purpose as our proposed subsection (a), and nothing in the compact appears to require our proposed subsection (b). Nevertheless, Congress may wish to impose the same general conditions on the Southeast compact as on the others in the interest of uniformity.

The next section of the proposed language addresses, first, the definition of low-level radioactive waste. The basic subject matter of the compacts should be essentially identical if a national system is to emerge. Since the compacts contain varying definitions of low-level waste, we have proposed language to conform each reasonably closely to the definition in the Low-Level Radioactive Waste Policy Act, sections 2(2) and (4) (42 U.S.C. 2021b(2), (4)). See Attachment, Rocky Mountain compact §§ 6(a), (b); Northwest compact § 6; Central compact § 5(a).

The second section also addresses the export of waste from a region. The Central and Rocky Mountain compacts provide that

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*The proposed language for the Northwest compact also includes a proposed revision to existing consent language, which appears first.

waste may not be exported from the compact region without the permission of the compact commission and the Southeast compact permits the compact Commission to prohibit export. As Mr. Kerr has testified, the Commission is concerned that export be allowed when health and safety reasons require it. Our language would require that compact commissions promptly permit the export of waste if the NRC or an Agreement State finds that export of such waste is required to protect the public health and safety. See Attachment, Southeast compact § 4; Rocky Mountain compact § 6(c); Central compact § 5(b).

Finally, section 2(a) of the Northwest compact bill contains Congressional consent language whereby NRC is "authorized and directed to require" its licensees to comply with the provisions of the compact. To the extent that some of the compact provisions in Articles III and IV(3) would alter the existing Federal regulatory scheme, we think that licensees should not be required to comply with them. We therefore believe that this provision should be deleted. The Northwest compact bill also declares that the compact is "in furtherance . . . of the intent of Section 274(b) of the Atomic Energy Act of 1954." Although the practical implications of this provision are unclear, it seems to be intended to provide Congressional ratification of the potential expansion of Agreement State powers which are suggested by Articles III and IV. We therefore believe that this provision should also be deleted. Revised language for section 2(a) is shown in the Attachment.

There are also several points which we think should be made in the committee reports or elsewhere in the legislative history, but which do not fit conveniently into the legislation itself. The Central compact, in Article V(e)(2), states that the compact Commission shall --

> 2. require the appropriate state or states or the U.S. Nuclear Regulatory Commission to process all applications for permits and licenses . . . within a reasonable period from the time that a completed application is submitted.

While we agree that licensing reviews should be completed within a reasonable time, we think the legislative history should make clear that this provision is exhortatory, not mandatory. The NRC or Agreement State, as the reviewer of the license or permit application, must have the discretion to consider the relevant health, safety, and environmental issues as it finds necessary. If it were required to comply with a schedule laid down by the compact commission, its independent authority to pass on these matters would be compromised.

Section 3(a) of the Northwest compact bill makes the effective date for exclusion of out-of-region waste under Article IV(2) of the Northwest compact January 1, 1986. However, Article IV(3) contains alternate provisions under which the Northwest compact will accept waste from States outside the compact before Article IV(2) takes effect. These provisions include requirements for 100% inspection of all shipments and for a binding liability agreement from each State outside the region covering accidental releases during shipment or at the regional facility. These provisions discriminate against States outside the compact region before January 1, 1986 and also require a rate of inspection in excess of that considered necessary by NRC.

On the other hand, the Northwest compact may not implement these provisions. Governor Spellman of Washington told this

Committee on November 9, 1982 that the development of regulations to implement Article IV(3) will not be put in final form until Congress has acted and the region knows that the parameters within which it is working are consistent with Congressional intent. Subsequently, the Northwest compact representative informed this Committee on March 2, 1983 that assurances from other States of adequate ongoing inspections, indemnification, and other evidence of dealing with the needs of the host State, by substantially complying with the intent of these provisions, would tend to minimize any need for rapid implementation of them. Nonetheless, the provisions of Article IV(3) could be put into effect any time after the compact is approved until Article IV(2) takes effect. The NRC therefore believes that the legislative record should state that Article IV(3) should not be construed to require a rate or frequency of inspections beyond that required by the NRC or an Agreement State where the shipment originates.

Some compact negotiators are concerned about the language of the exclusion, under the Low-Level Radioactive Waste Policy Act, of waste from the "atomic energy defense activities of the Secretary" of Energy. Their concern is that if they follow the legislative language and exclude atomic energy defense waste only from DOE, and then through reorganization or other means such wastes become the responsibility of other agencies such as the Departments of Defense or Commerce, their exclusion would no longer hold. We think that the compacts would not be sc narrowly interpreted. However, these apprehensions, and the perceived necessity to broaden the language in the compacts to address all eventualities with respect to the agency generating such atomic energy defense wastes, might be alleviated if Congress were to make it clear that the exclusion applies to the atomic energy defense wastes of the Department of Energy or any successor thereto.

Finally, Article 3(C) of the Southeast compact in effect requires party states to become Agreement States under Section 274b. of the Atomic Energy Act. It is important that the compact be construed to preserve NRC's authority to reject, modify, or accept a proposed agreement or to resume regulatory authority if a state relinquishes its agreement. While Articles 6(A)(1) and (2) of the compact probably accomplish this result, language in the legislative history to this effect would be helpful.

SOUTHEAST COMPACT

S. 1749 and H.R. 3777

Sec. 4. In exercising its authority under Article 4(L) of this compact, the Compact Commission shall promptly permit the export of any waste from the region upon a finding by the Nuclear Regulatory Commission or an Agreement State that the export of such waste is required to protect the public health and safety.

ROCKY MOUNTAIN COMPACT

S. 1991 and H.R. 4388

Sec. 5. (a) Nothing in this compact shall be construed to diminish or otherwise impair the jurisdiction, authority, or discretion of the U.S. Nuclear Regulatory Commission under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.), or any Agreement State under section 274 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2021).

(b) Nothing in this compact, and particularly in Articles III(d) and (f), shall be construed to confer any new authority on the States or the compact Board to --

(i) regulate the packaging or transportation of radioactive wastes in a manner inconsistent with the regulations of the Nuclear Regulatory Commission or the U.S. Department of Transportation,

(ii) regulate health, safety, or environmental hazards from source, byproduct, or special nuclear material, or

(iii) inspect the activities of licensees of the Nuclear Regulatory Commission.

Sec. 6. (a) Article II(g)(i) of this compact shall be construed to exclude from the definition of "low-level

waste" or "waste" only waste generated as a result of atomic energy defense activities of the Secretary of Energy, as defined in section 2(4) of the Low-Level Radioactive Waste Policy Act (42 U.S.C. 2021b(4)), and Federal research and development activities.

(b) Article II(g)(iii) of this compact shall be construed to exclude from the definition of "low-level waste" or "waste" only waste materials containing trans-uranic elements with contamination levels greater than the levels permitted in low-level waste by applicable regulations of the Nuclear Regulatory Commission [as of December 27, 1982].

(c) In exercising its authority under Article VII(b) of the compact, the compact Board shall promptly permit the export of any waste from the region upon a finding by the Nuclear Regulatory Commission or an Agreement State that the export of such waste is required to protect the public health and safety.

NORTHWEST COMPACT

S. 247 and H.R. 1012

Sec. 2. (a) Congress finds that the compact consented to herein is in furtherance of the policy contained in section 4(a)(1) of the Low-Level Radioactive Waste Policy Act of 1980 (42 U.S.C. 2021d(a)(1)). ~~and of the intent of Section 274(b) of the Atomic Energy Act of 1954.~~ In order that this compact may be given full effect, the Nuclear Regulatory Commission ~~is authorized and directed to require licensees subject to its jurisdiction under the Atomic Energy Act of 1954 to comply with the provisions of this compact.--The Commission~~ shall consult and cooperate with the states which are parties to this compact in carrying out this section.

* * *

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*Our amendments to section 2 refer to the language of H.R. 1012. We understand that the Committee expects to amend section 2 of S.247 to conform to the language of H.R. 1012.

Sec. 4. (a) Nothing in this compact shall be construed to diminish or otherwise impair the jurisdiction, authority, or discretion of the U.S. Nuclear Regulatory Commission under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.), or any Agreement State under section 274 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2021).

(b) Nothing in this compact, and particularly in Articles III and IV, shall be construed to confer any new authority on the States or the Compact Committee to --

(i) regulate the packaging or transportation of radioactive wastes in a manner inconsistent with the regulations of the Nuclear Regulatory Commission or the U.S. Department of Transportation,

(ii) regulate health, safety, or environmental hazards from source, byproduct, or special nuclear material, or

(iii) inspect the activities of licensees of the Nuclear Regulatory Commission.

Sec. 5. Notwithstanding Article II(2), the term "low-level waste" means radioactive waste that --

(i) is not high-level radioactive waste, spent nuclear fuel, transuranic waste, or byproduct material as defined in section 11 e(2) of the Atomic Energy Act of 1954 (42 U.S.C. 2014(e)(2)),

(ii) is not low-level radioactive waste from atomic energy defense activities of the Secretary of Energy, as defined in section 2(4) of the Low-Level Radioactive Waste Policy Act (42 U.S.C. 2021b(4)), or from Federal research and development activities, and

(iii) is classified by the Nuclear Regulatory Commission as low-level radioactive waste.

Sec. 4. (a) Nothing in this compact shall be construed to diminish or otherwise impair the jurisdiction, authority, or discretion of the U.S. Nuclear Regulatory Commission under the Atomic Energy Act of 1954, as amended (42 U.S.C. 2011 et seq.), or any Agreement State under section 274 of the Atomic Energy Act of 1954, as amended (42 U.S.C. 2021).

(b) Nothing in this compact shall be construed to confer any new authority on the States or the compact Commission to --

(i) regulate the packaging or transportation of radioactive wastes in a manner inconsistent with the regulations of the Nuclear Regulatory Commission or the U.S. Department of Transportation,

(ii) regulate health, safety, or environmental hazards from source, byproduct, or special nuclear material, or

(iii) inspect the activities of licensees of the Nuclear Regulatory Commission.

Sec. 5. (a) Article VI.a.6. shall be construed to exclude from the coverage of the compact only low-level radioactive waste from atomic energy defense activities of the Secretary of Energy, as defined in section 2(4) of the Low-Level Radioactive Waste Policy Act (42 U.S.C. 2021b)), and from Federal research and development activities.

(b) In exercising its authority under Article III.g. of the compact, the compact Commission shall promptly authorize the export of any waste from the region upon a finding by the Nuclear Regulatory Commission or an Agreement State that the export of such waste is required to protect the public health and safety.

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

JAN 25 1984

MEMORANDUM FOR: G. Wayne Kerr, Director
Office of State Program

FROM: Guy H. Cunningham, III
Executive Legal Director

SUBJECT: CIVIL PENALTY PROVISIONS OF PROPOSED ROCKY MOUNTAIN LOW LEVEL RADIOACTIVE WASTE COMPACT

In your memorandum of January 13, 1984, you asked for a legal analysis of the civil penalty provisions of the proposed Rocky Mountain Radioactive Waste Compact, in order to supplement your testimony given at the Senate Judiciary Committee Hearing on the compact held in Cheyenne, Wyoming, on January 12, 1984.

The proposed Rocky Mountain Low Level Radioactive Waste Compact (S.1991, 9th Congress, 1st Session) contains two provisions imposing civil penalties on any person who violates certain other provisions of the compact.

1. Paragraph VII(e) provides for a penalty of ten times the disposal charge that would have been collected for disposal at the regional site to be levied, (i) against a person disposing of low level waste elsewhere in the region (persons disposing of their own waste on their own property prior to January 1, 1982 are exempted (paragraph VII(a)), and (ii) against any person exporting low level waste outside the region for disposal (paragraph VII(b)).

2. Paragraph VII(f) provides for a penalty of ten times the disposal charge to be levied, (i) against any person within the region managing waste not generated within the region (paragraph VII(c)), and (ii) against any person managing a regional facility who manages any waste other than low level waste as defined in the compact (paragraph VII(d)).

It seems clear that the provisions of the compact to which the civil penalties in paragraph VII(e) pertain are designed to ensure that low level radioactive waste generated within the region is disposed of only at the regional disposal site. Both disposal by burial elsewhere in the region and export of waste are prohibited. There does not appear to be any suggestion that these prohibitions are motivated by health or safety concerns. On the assumption that economic concerns are the motivating factors for this regulatory effort by the compacting States, the proscribed activities are not preempted by the Atomic Energy Act of 1954, as amended. See Pacific Gas and Electric Co. v. State Energy Resources Cons. and Dev. Commission, ____ U.S. ____ (1983). The Low Level Radioactive Waste Policy Act (Pub. L. 96-573, 94 Stat. 3347) is silent on any provision in a compact which restricts export of low level waste for disposal. Accordingly, the provision in the compact could possibly be vulnerable to a legal challenge that it is an

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unreasonable burden on interstate commerce. Congressional approval of such a provision in the compact, however, would minimize, if not eliminate, this vulnerability.

The provisions of paragraph VII(f), providing a penalty for managing within the region waste from outside the region, may be seen as both political and economic in purpose. This particular provision enforces the authority in the Low Level Radioactive Waste Policy Act to exclude out-of-region wastes from a regional disposal site. If out-of-region waste cannot be managed in the region, perforce such waste cannot be disposed of within the region. From our perspective the difficulty with this provision is not that the proscribed activity is preempted under the Atomic Energy Act of 1954, as amended, but rather that the provision exceeds the scope of authority to negotiate compacts for disposal of waste provided for in the Low Level Radioactive Waste Policy Act. By its terms the Low Level Radioactive Waste Policy Act only authorized compacts for the purpose of disposal of waste. The concept of waste "management," as presented in this compact as well as in others, goes beyond what the Congress appears to have authorized. We understand that NRC Staff has consistently commented on this aspect of all proposed compacts. However, insofar as the provision is not premised upon health or safety concerns it is not preempted.

Paragraph VII(f) also provides a civil penalty for managing at the regional disposal facility any waste other than low level waste as defined in the compact. The definition of low level waste in the compact (Article II(g)) is consistent with statutory objectives (see Low Level Radioactive Waste Policy Act, Section 2(2)), and thus within the scope of the enabling law.

Accordingly, one cannot say that the penalty provision in paragraph VII(f) is preempted. It does not result in exclusion of any low level waste from the disposal site on health and safety grounds but rather implements the Low Level Radioactive Waste Policy Act in a manner consistent with the Atomic Energy Act of 1954, as amended, and the Commission's regulations.

Your memorandum to us also refered to paragraph III(f) of the proposed compact as presenting an issue of civil penalty. We do not find in the proposed compact any provision of civil penalty for either violation of or non-performance under paragraph III(f). This provision of the compact requires each member State to adopt and enforce procedures requiring waste shipments originating within its borders to conform to packaging and transportation requirements. Such procedures shall include inspections and enforcement actions.1/ These procedures do not appear to be based on economic concerns.

1/ Twenty-six States already possess authority to undertake these functions for materials subject to their jurisdiction under agreements entered into pursuant to Section 274b. of the Atomic Energy Act of 1954, as amended. These agreements do not, however, cover waste materials at reactors. The NRC Staff has suggested to these States and to States without such agreements that a memorandum of understanding, pursuant to Section 274i. of the Atomic Energy Act of 1954, as amended, may provide an avenue for such States to conduct inspections at reactors of waste packaging and transportation on behalf of NRC and pursuant to Federal standards.

The difficulty with paragraph III(f) is that it leaves open the possibility that member States may utilize standards and procedures that are not compatible with or in conflict with Federal health and safety standards for the same activities. Accordingly, there is a potential for preemption under

Pacific Gas and Electric Company. However, Resolution Number 2 of the Rocky Mountain Low Level Radioactive Waste Board states that the proposed compact does not grant any additional regulatory authority to its member States and that no inconsistent packaging and transportation requirements will be adopted. If this understanding is incorported into the Congressional consent legislation we would see no preemptive issue remaining in the proposed compact.

Your memorandum also asked us to address the implications of Silkwood v. Kerr McGee Corp., ____ U.S. ____ (1984) for the imposition of civil penalties under the compact. The Silkwood case holds that the award under State tort law of punitive damages for redress of personal or property injury due to radioactive materials is not preempted by the Atomic Energy Act of 1954, as amended. The Court found no evidence of a Congressional intent to preempt State tort remedies, and no conflict with the Federal remedial scheme of civil penalties under the Atomic Energy Act of 1954, as amended. This is so even if the same incident lies at the root of both civil penalties levied by the Commission and punitive damages awarded in civil litigation.

Because the Rocky Mountain compact's civil penalty provisions fall more precisely within the scope of the non-preempted area of State economic concerns established in Pacific Gas and Electric Co. , the Silkwood case is not relevant to their validity. We believe that the Silkwood case is applicable only to the kind of situation with which it dealt, i.e., the award of punitive damages in civil tort actions that arise out of regulated nuclear activities, even if such an award of punitive damages turns out to be an indirect regulation of the health and safety aspects of the nuclear activity. While the Silkwood case may have serious implications for the third party liability vulnerabilities of nuclear licensees, it is not germane to the legality of the civil penalty provisions of the Rocky Mountain Compact, which are not founded on tort law but on State economic regulation.

Guy H. Cunningham, III
Executive Legal Director

Senator SIMPSON. Thank you, Mr. Kerr. I think I will just go through the panel, and then come back to individual questions for each of the panel members. So Mr. Hamric, please.

STATEMENT OF J. P. HAMRIC, DIRECTOR, NUCLEAR FUEL CYCLE AND WASTE MANAGEMENT DIVISION, U.S. DEPARTMENT OF ENERGY, IDAHO OPERATIONS OFFICE

Mr. HAMRIC. Yes, Mr. Chairman. I'm Phil Hamric, with the Department of Energy in the Idaho Falls area, the Idaho Operations Office. I have brought a member of my staff with me to answer questions that may be more detailed than I can handle. His name is Michael Barainca. I will summarize my statements, Mr. Chairman. I request that the full statement which we have sent to your office be made a matter of record.

Senator SIMPSON. Without objection. So ordered.

Mr. HAMRIC. We appreciate the opportunity to be here at this hearing, to provide the Department of Energy views, and to answer your questions. I would first like to commend the Rocky Mountain States for their aggressive action in establishing a compact and their current efforts to locate a site.

Going directly to answer the questions in your December 7, 1983 letter, questions one and four regarded the possible circumstances under which the Department of Energy might dispose of waste at a disposal site within the compact region. We cannot foresee any circumstances at this time under which this would happen. If invited to examine this possibility by the compact region, we would do so and notify Congress of such activity.

Currently, within the compact region, the Department of Energy has five sites which generate 13,000 cubic meters of low-level waste per year.

The second and third questions related to the Department's position on whether or not we would comply with the same agreements and regulations and requirements that the compact disposal site would impose upon commercial generators if the Department were to dispose of waste in that site.

I would answer that question with a yes. Since our current policy is to provide a level of protection comparable to the NRC's regarding safety and environment, this would not be a problem for the Department for we would follow the rules just as the commercial generators would.

The fifth question related to possible inconsistencies of definitions in the compact. We believe that the compact, as written, and including the definitions, is substantially complete and that clarifications of definitions can be taken care of in the consent language.

I generally support Mr. Slosky's statement relative to the clarification of the definition of Federal waste to be disposed of in the compact region. The NRC, in their testimony describes a new standard agreement to provide nonagreement States with authority to perform inspections. We support inspections, including Federal facilities contingent upon prior consent and observation of security requirements.

As a comment, we believe that the compact regions with sites should be allowed to negotiate agreements with siteless regions and States for some degree of continued use of the disposal facilities that currently exist, contingent upon the regions without sites pursuing a good faith effort to implement the Low-Level Waste Policy Act of 1980. I believe that if the States are allowed to do this, then they are, in fact, carrying out the intent of the Low-Level Waste Policy Act of 1980.

In summary, we believe that the compact is essentially solid; with a small amount of clarification in consent language, it would be totally satisfactory. We recommend that the Department of Energy continue to handle its own waste, and that other Federal agencies continue the practice which existed in 1980 and dispose of their waste at commercial sites.

Finally, we believe that congressional consent will stimulate States which have not yet formed compacts to move more aggressively to implement the act of 1980. Thank you.

[Prepared statement follows:]

STATEMENT OF J. P. HAMRIC
DIRECTOR, NUCLEAR FUEL CYCLE AND WASTE
MANAGEMENT DIVISION
U.S. DEPARTMENT OF ENERGY
IDAHO OPERATIONS OFFICE
BEFORE THE
SENATE JUDICIARY COMMITTEE

January 12, 1984

Mr. Chairman and Members of the Committee: I appreciate the opportunity to appear before you today regarding the Rocky Mountain Low-Level Radioactive Waste Compact and S.1991, which would grant the consent of Congress to this Compact. In my testimony, I shall address the Department of Energy's views on the Rocky Mountain Compact, summarize our answers to the Committee's specific questions for which detailed information is attached, and comment on the effect Congressional consent may have on establishment of a National low-level radioactive waste management system.

Regarding the Rocky Mountain Compact, the member states are to be commended for having drafted and approved an interstate compact for the management of low-level radioactive waste generated in their region. They have demonstrated a strong commitment to fulfilling their responsibilities under the Low Level Radioactive Waste Policy Act (the Act). The Compact, as written, needs some clarification to assure a uniform national system of low-level waste disposal.

The Compact's definition of low-level radioactive waste (Article II(g)) is not in accordance with the Act, or the Nuclear Waste Policy Act of 1982. Also, the Compact's definition as it affects federal waste, waste material containing transuranic elements, and the processing of certain ores and mineral-bearing materials is inconsistent with other proposed Compacts. This creates a potential for inconsistency among regions. We believe that Congress, to assure a workable nationwide system, should adopt the definition used in the Nuclear Waste Policy Act of 1982 in its consent action for all compacts.

The Compact's provisions regarding the handling of federal low-level radioactive waste would alter current practices for management and disposal. Articles I(a) and II(g) exclude all waste generated as a result of defense activities of the Federal Government from the category of low-level waste for which member states are responsible, rather than just those defense activities of the Secretary of Energy as specified in the Act.

Several federal agencies, in addition to the Department of Energy, generate low-level radioactive waste through research and development activities.

These agencies (with the exception of DOE) routinely ship low-level waste to commercial facilities for disposal. Since the compact also excludes all federal research and development waste, we support Congressional clarification of the Compact language to provide for continued disposal of those federally-generated low-level wastes currently handled by commercial facilities. We do not believe it was Congress' intent in passing Low-Level Radioactive Waste Policy Act to alter the present pattern of waste disposal.

Article III(f)(1) requires Compact party States to adopt and enforce procedures requiring low-level waste shipments, originating within its borders and destined for a regional facility, to conform to certain packaging and transportation requirements and regulations. This includes periodic inspection of waste packaging and transportation practices.

The Committee should note that unless a State has executed an agreement with the U.S. Nuclear Regulatory Commission under Section 274i of the Atomic Energy Act of 1954, as amended, it is preempted from conducting inspections of nuclear reactors and federal facilities. On October 22, 1983, the NRC proposed a standard 274i agreement which would permit State sponsored inspections at reactor sites, and with prior consent, at federal installations, to determine compliance with NRC packaging and transportation regulations. We believe onsite inspection at federal installations should be made on the basis of prior consent, and have supported the proposed 274i agreement language to that effect. Access to security areas or classified operations at the site of generation should not be authorized. For such facilities, the inspection could take place at some intermediate location.

Article VIII(c) provides that the Compact shall take effect when it has been enacted by two eligible states, with the exception of subsections (b) and (c) of Article VII, which would not take effect prior to Congressional consent to the Compact. A literal interpretation of section 4(a)(2)(B) of the Act would lead to the conclusion that no Compact provisions could take effect prior to Congressional consent. We believe the consent provision was intended to apply only to those activities which do not increase the sovereign power in the States, and encroach upon or interfere with the just supremacy of the Federal government. Since Article VII, "Prohibited Acts and Penalties," could affect interstate commerce, it appears that, at a minimum, all of Article VII would not be effective until consented to by Congress.

I would now like to address the specific questions asked in your letter of invitation regarding circumstances under which the Department might dispose of its low-level radioactive waste at a Rocky Mountain Compact facility. We cannot anticipate any circumstances under which the Department would have to rely on use of a Rocky Mountain Compact facility to dispose of waste generated either within or outside that region. Approximately 13,000 cubic meters of low-level waste are generated annually by five DOE facilities in the Rocky Mountain Compact region.

The Department would be willing to consider a request by the Rocky Mountain Compact Board to dispose of DOE low-level waste at a Compact facility. Such a request might be based on economic considerations related to regional facility operations.

If DOE were invited to use a Rocky Mountain disposal facility, we would comply with all applicable terms and conditions. We suggest that the Congress consider adopting language that allows the federal agencies to pay reasonable service surcharges to the same extent as any nonfederal waste generator.

Finally, the Rocky Mountain Compact definition of low-level waste creates a potential for inconsistency. It is not identical to the definitions contained in the Low-Level Radioactive Waste Policy Act or the Nuclear Waste Policy Act of 1982. We believe that, to concisely identify the scope of compact responsibility, Congress should adopt the definition used in the Nuclear Waste Policy Act of 1982 in its consent language for all compacts.

In summary, we believe that timely Congressional approval of all the Compacts now before Congress would stimulate States outside these regions to increase their efforts to establish operating compacts and move forward with the critical task of developing new low level waste disposal facilities. Timely consent would also tend to discourage fragmentation of the other compact groups. Critical review and approval of these compacts will reaffirm the Congressional commitment to timely establishment of a regional system of low-level radioactive waste disposal facilities and thereby reduce the potential for development of a relatively large number of disposal sites compared to the number needed to serve a workable national waste management system.

Attachment

1. Under what circumstances, if any, do you envision the Department of Energy having to rely on a disposal facility developed by the Rocky Mountain region for disposal of low-level wastes generated by DOE? What quantities of wastes are involved, at what facilities are these wastes generated, and where are these wastes currently disposed of?

Answer:

We do not envision the Department having to rely on a disposal facility developed by the Rocky Mountain region for disposal of its low-level waste. Sufficient capacity exists at DOE disposal sites for all DOE wastes. Within the Rocky Mountain compact region, the following volume of DOE waste was generated in 1982.

Generator	Disposal Site	1982 Volume (m^3)
Los Alamos National Laboratory (New Mexico)	On-Site	5,734
Lovelace Inhalation Toxicology Research Institute (New Mexico)	Nevada Test Site	68
Rocky Flats Plant (Colorado)	Nevada Test Site	6,671
Sandia National Laboratory (New Mexico)	On-Site	49
Nevada Test Site	On-Site	1,160

Source: U.S. Department of Energy, Solid Waste Information Management System (SWIMS), computerized data base maintained at EG&G/ID by H. M. Batchelder.

2. In the event that the Rocky Mountain Compact Board should decide that the orderly management of a regional disposal site, including the management of the quantities and types of waste to be disposed of at the site, necessitates some mutual understanding between the Compact Board and DOE concerning the amounts and types of waste to be disposed of by DOE at the site, would the Department be agreeable to entering into such an agreement?

Answer:

Although the Department cannot anticipate any circumstances under which it would have to rely on a Rocky Mountain Compact disposal facility, we would be willing to consider a request by the Rocky Mountain Compact Board for disposal of DOE waste at a Compact facility. Consent to such a request would be based on an evaluation of then existing Department waste management practices and related economic considerations, and consideration of the types and quantities of waste which might be shipped to a regional facility. In the event disposal arrangements were technically feasible and acceptable to the parties involved, the Department would explore agreements to formalize such a relationship.

3. Is the Department agreeable to complying with the same terms and conditions (including payment of taxes or fees) that are applicable to the disposal of commercially generated low-level waste?

Answer:

The question has been raised as to whether federal generators should be subject to the same terms and conditions--including payment of taxes or fees--applicable to the disposal of commercially generated low-level waste. Currently, federal agencies meet the same technical regulations and requirements that are applicable to commercial generators. Regarding fees, Article V of the Rocky Mountain Compact provides for imposition of surcharges by the Compact Board and the host state for use of a regional facility. Where payment is for services rendered by the facility operator, federal agencies may pay the charge. However, if a financial imposition is laid directly upon the Federal Government, as opposed to a Government Contractor, by a State, it cannot be honored under existing law whether characterized as a fee or tax, even if the facility operator is the collector. We suggest that the Congress consider adopting language that allows the federal agencies to pay reasonable service surcharges imposed by the compact commissions or party States to the same extent as any nonfederal waste generator.

If DOE were invited to use a Rocky Mountain facility, we would comply with all applicable terms and conditions, although we may be prohibited from paying certain charges, as discussed above, unless Congress explicitly provides for such authority.

4. Under what circumstances would it be necessary for the Department to dispose of waste generated outside of the Rocky Mountain region at the Rocky Mountain disposal site? If each region were to provide sufficient capacity for these wastes to be disposed of within the region, would such interregional arrangements be necessary?

Answer:

As noted previously, low-level waste generated from defense activities of the Department of Energy are disposed of at DOE sites and, as stated in the Low-Level Radioactive Waste Policy Act, are excluded from State responsibility. In the hypothetical case where DOE disposed of its waste in regional compact sites, DOE could be treated as other Federal agency waste generators and, under normal operations, would not dispose of waste generated outside the Rocky Mountain region at the Rocky Mountain Compact disposal site. In response to the second part of the question, there would be no need for an interregional arrangement.

5. To what extent, if any, do the definitions contained in the Rocky Mountain Compact create a potential for inconsistency among regions? In those instances where the definition in the compact is not identical to the language contained in the Low-Level Radioactive Waste Policy Act, does the compact definition, nevertheless, achieve an equivalent effect? If so, would you recommend that the Congress amend the compact definition for the sake of ensuring that all definitions are identical? Please explain.

Answer:

The definition of low-level waste in the Rocky Mountain Compact is consistent with the Low-Level Radioactive Waste Policy Act with the following exceptions: 1) the limit on levels of transuranic materials of 10 nanocuries per gram (nCi/g) of waste conflicts with the Nuclear Regulatory Commission's (NRC) regulation 10 CFR 61.55(a)(3), Table 1, which permits up to 100 nCi/g in Class C waste; 2) waste generated as a result of defense activities of the federal government are excluded, not just the atomic energy defense activities of the Secretary of Energy; 3) it recognizes amendments to the Atomic Energy Act only through 1978; and 4) the compact differs from the Low-Level Radioactive Waste Policy Act and NRC regulations by excluding in Article II(g)(v) wastes from mining, milling, smelting, or similar processing of ores and mineral bearing material primarily for minerals other than radium. It is not clear that the issue of ultimate disposal of these wastes has been resolved. If it were determined that some of these wastes were suitable for disposal as Low-Level Waste, the exclusion in Article II(g)(v) could permit the Rocky Mountain Compact to refuse to take such wastes in its regional Low-Level Waste site. No other compact has such an exclusion.

The Compact definition does not achieve an equivalent effect in the above mentioned areas because the transuranic limit is different, it broadens the exclusion for DOE waste to all defense waste, and, by recognizing amendments to the Atomic Energy Act only through 1978 and, excluding mining wastes, it may create "orphan" waste categories and uncertainty in the future.

There is no indication that Congress intended the Act to alter the type of waste handled within the commercial radioactive waste management system. Low-level waste accepted at commercial disposal sites at the time of passage of the Act should be accepted for disposal in the future. We believe any definition should support this policy.

The four regional compacts before the Congress do not contain identical definitions. In most cases, the compact definitions vary slightly from the

exact definition stated in the Act, by region specific considerations. We believe that a more precise definition is necessary in order to clearly define the scope of compact responsibility. Such a definition should not be subject to interpretation. We have recommended in previous testimony that the Congress consider adopting the definition of low-level waste in the Nuclear Waste Policy Act of 1982 in its consent to the compacts.

As noted, the Rocky Mountain Compact definition of "low-level waste" is inconsistent with other proposed Compact definitions, and the definitions contained in the Act and Nuclear Waste Policy Act of 1982. This Compact's exclusion of all waste generated as a result of defense activities of the federal government, rather than those of the Department of Energy as defined in the Act, creates the potential for inconsistent practices among regions regarding the handling of non-DOE federal wastes. Under Article VII(d), it is unlawful to dispose of such waste at a regional facility without Compact Board and host state authorization. This intent is further expressed in Article I(a). These provisions could place a burden on other Compact regions to provide disposal capacity for such wastes. We do not believe that this is consistent with Congressional intent.

The definition of "disposal" contained in the Rocky Mountain Compact differs from language contained in the Act and other proposed Compact definitions. We believe the varying definitions of "disposal" used are equivalent in effect, and will not create inconsistencies among the regions.

Senator SIMPSON. Thank you very much. Colonel Daley, please.

STATEMENT OF LT. COL. PETER S. DALEY, DIRECTOR, ENVIRONMENTAL POLICY, DEPARTMENT OF DEFENSE

Lieutenant Colonel DALEY. Thanks, Senator. I am Peter Daley, Director of Environmental Policy for the Department of Defense. I am happy to be here to present the views of the Department on the Rocky Mountain Compact, Senate bill 1991.

I will summarize my comments and then ask that my full statement be included in the record.

Senator SIMPSON. Without objection, so ordered.

Lieutenant Colonel DALEY. As an introduction, I would like to say that we are encouraged by the progress that's been made in the compact development so far. Your committee and the States of the Rocky Mountain Compact particularly are to be credited for timely efforts in trying to bring the compact together.

I am pleased to say that since we met last March, and I testified before this committee at that time, most of the difficulties and issues that were raised by the Department have been resolved. A few points do remain, however, which I would like to bring up.

First, the Rocky Mountain Compact as it is written excludes all waste generated by defense activities. This is not consistent with the Low-Level Waste Policy Act which excludes only defense activities of the Secretary of Energy, and Federal research and development activities.

Although compact representatives have agreed to accept low-level waste from the Department of Defense operations, we believe that this agreement must be formalized in the congressional consent language. Without this, we may be precluded from disposing of low-level wastes at the region's burial sites at some time in the future.

I would like to reaffirm that the Department has no plans to ship wastes across compact boundaries. If a regional site is not available, however, critical defense activities might be at risk, unless alternate sites are made available somewhere else.

Therefore, we recommend that the Congress authorize the President, or his designees, to authorize emergency shipments of low-level waste to the nearest operating low-level waste disposal site outside the generating region. This authority would be invoked rarely. The authority is similar to authority in the Clean Air Act, Federal Water Pollution Control Act, and the Safe Drinking Water Act to provide for exemptions in the event of national emergencies. We think that this consistency of policy in the Federal Government is essential.

The Department is concerned that the compact's provision for onsite inspections would extend to low-level waste packaging activities in secure and classified areas. The Department of Defense has no objection for the general provisions for inspection of our packaging and shipping activities. We recommend, however, that if such inspection takes place, they should not extend into secure areas or classified operations since this could compromise national security. Alternatively, we have proposed provisions for inspecting waste generated in secure locations after they are moved to a free access area.

I will summarize the answers to the specific questions raised in the letter of invitation. First, the Department of Defense is planning to use the Rocky Mountain disposal site for disposal of approximately 125 cubic feet per year of waste generated by defense activities within the region. This waste primarily arises from medical activities at the defense medical facilities.

Second, the Department is willing to discuss a mutual understanding with the Rocky Mountain compact board. We have entered into some discussions already and we are willing to continue this process in a cooperative fashion.

Third, we would expect to pay the same disposal surcharges as any private generator. However, because of our previous experience in this area, we believe congressional consent language should explicitly authorize this to avoid a possible legal ruling that Federal activities are not permitted to pay the fees since they may be construed as taxes.

Fourth and finally, we would not normally ship low-level waste outside the Rocky Mountain region to a Rocky Mountain site. However, as I stated earlier, we believe Congress should provide the President with emergency power to authorize us to ship low-level waste across regional boundaries to the Rocky Mountain region, if local disposal sites in which the wastes are generated are not available. This temporary authority should be limited for use only when needed to avoid adverse impacts of critical defense operations.

In conclusion, Mr. Chairman, we are encouraged by progress to date, and we will work closely with you and the States to expedite the resolution of a few remaining issues.

Senator SIMPSON. Thank you very much.

[Prepared statement follows:]

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By The Committee on the Judiciary
United States Senate

STATEMENT OF

PETER S. DALEY, Ph.D.
DIRECTOR OF ENVIRONMENTAL POLICY
DEPARTMENT OF DEFENSE

Mr. Chairman and Members of the Committee, I am Peter S. Daley, Director of Environmental Policy for the Department of Defense. I am pleased to appear before this Committee to present the views of the Department on the Rocky Mountain Compact, and on Senate Bill S. 1991. I will also provide answers to the specific questions which the Committee asked, and I will summarize them in these remarks.

The Department is encouraged by the progress made by a number of States in forming interstate compacts for disposal of low-level radioactive wastes. We believe the compact concept is sound. Your Committee and States which form the Rocky Mountain compact deserve credit for your responsible and timely efforts.

Department of Defense and other federal activities generate low-level radioactive waste which is currently buried at commercial sites. The total quantity of Defense Department-generated waste nationally is approximately 50,000 cubic feet per year. This includes low-level waste from military hospitals, and other defense-related activities of the Army, Navy, and Air Force, including naval shipyards and other support facilities that maintain the Navy's nuclear-powered ships. The Department of Defense plans to continue using commercial low-level waste disposal facilities for disposing of the waste indefinitely. This is in accordance with the Low-Level Radioactive Waste Policy Act.

There are several issues, however, which have arisen regarding compacts that could adversely impact the national defense responsibilities of the Department of Defense. I will discuss these issues in the context of the Rocky Mountain Compact, but they apply equally to other compacts as well.

We believe that the definition of low-level radioactive waste should be uniform throughout the United States. We note the Rocky Mountain Compact definition, in Article II.(g), is not consistent with other compacts or with the Low-level Waste Policy Act. We believe a uniform national definition is essential to prevent misinterpretation and confusion.

The Rocky Mountain Compact, in Articles I(a) and II (g) excludes all waste generated as a result of defense activities of the federal government. This is not consistent with the Low-level Waste Policy Act, which excludes defense activities of the Secretary of Energy and federal research and development activities. The Department of Defense has expressed its concern to representatives of the Rocky Mountain Compact, and we understand they have informally agreed to accept Department of Defense low-level wastes. However, we believe that this agreement must be recognized formally, through Congressional consent language. Without this clarification, DoD could be precluded from disposing of low-level waste generated by defense activities located in the Rocky Mountain Compact region at the region's burial site, solely on the basis of the definition contained in the Rocky Mountain Compact.

The Department of Defense plans to use the regional disposal site servicing the State where the generating DoD activity is located. However, in the event a regional site is not available for reasons beyond our control, potentially adverse impacts on defense activities may occur if a DoD activity is unable to dispose of its low-level waste. Therefore, we recommend that Congress authorize the President, or his designee, to allow emergency shipments of low-level waste to the nearest operating low-level waste disposal site outside the generator's region, when necessary. Clearly, we envision this authority being invoked rarely, if ever, for a limited period, and only upon a finding by the President, or his designee, that the circumstances warrant taking this extraordinary action. DoD would not seek to routinely ship wastes to any disposal site based on economics. We believe it essential to have the legal authority to dispose of our wastes in a permitted facility if the unavailability of a regional disposal site is adversely affecting vital national defense activities. This authority is not a precedent and is consistent with authority already given the President in the Federal Clean Air Act, the Federal Water Pollution Control Act, and the Safe Drinking Water Act.

The Rocky Mountain Compact, in Article III(f)(i) requires that States in the Compact adopt procedures for inspection of packaging and shipping practices for low-level waste which originates within their borders. The Department of Defense would comply with all packaging and shipping requirements. However, the Department of Defense is concerned with on-site periodic inspection of low-level waste originating from within security areas or classified operations. The Department of Defense has no objection to State inspection of our packaging or shipping, which should always comply with all established standards. We recommend if such inspections take place, they should be conducted at intermediate locations, and should not extend to security areas or classified operations.

The Rocky Mountain Compact, in Article III(f)(v) authorizes each party state to "impose requirements or regulations more stringent than those required by this subsection." The Department of Defense believes this wording is unclear because the antecedent "subsection" is not precisely identified.

The Department of Defense recommends that Congress adopt consent language authorizing federal activities to pay for low-level radioactive waste at regional disposal sites the same as private parties. We need this authority to enable us to pay State fees or surcharges which otherwise may be construed as taxes. We expect to pay our fair share, and wish to avoid future legal problems, since federal activities are otherwise barred from paying State taxes.

Mr. Chairman, I will summarize our answers to the specific questions raised in your letter of invitation.

First, the Department of Defense is planning to use the Rocky Mountain disposal site for disposal of approximately 125 cubic feet of waste per year, generated by Defense activities located within the Rocky Mountain region.

Secondly, the Department of Defense would be agreeable to discuss mutual understandings with the Rocky Mountain Compact Board. We would like to be considered as any other private party generating low-level wastes in the region.

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Third, we would expect to pay the same disposal surcharges as any private generator. However, we believe Congressional consent language should explicitly authorize this to avoid the possible legal ruling that federal activities are not permitted to pay fees since they are State taxes.

Fourth and finally, we would not normally ship low-level wastes generated outside the Rocky Mountain region to the Rocky Mountain site. However, as I stated earlier, we believe Congress should provide the authority for us to ship low-level waste across regional boundaries in the event of circumstances beyond DoD's control which might force the normally-used regional disposal site to not be available. We would request this temporary authority only if the lack of disposal capacity was clearly having an adverse impact on critical national defense activities. We would then ship to the nearest available disposal facility. This unusual circumstance would be the exception, and we would expect to use it very infrequently.

In summary, Mr. Chairman, DoD is encouraged by progress to date. We hope for a speedy completion of the compact approval process. We believe the regional concept is sound and equitable, and we will work as closely as necessary with you and the States to expedite resolution of the few remaining issues.

Again, let me express my appreciation to the Committee for considering the views of the Department of Defense.

Mr. Chairman, I will be happy to answer any questions you or members of the Committee may have.

QUESTION NO. 1:

Under what circumstances, if any, do you envision the Department of Defense having to rely on a disposal facility developed by the Rocky Mountain region for disposal of low-level wastes generated by DoD? What quantities of wastes are involved, at what facilities are these wastes generated, and where are these wastes currently disposed of?

ANSWER:

The Department of Defense (DoD) would normally rely on the Rocky Mountain regional site for disposal of all DoD-generated low-level radioactive waste generated in the region only. Normally, no other DoD-generated waste would be disposed of in the Rocky Mountain disposal site (see Answer to Question No. 4). The following table shows the current DoD generators in the Rocky Mountain region, quantities, and currently-used disposal sites.

Generator	Disposal Site	1982 Volume (cubic feet)
Luke Air Force Base, AZ; and Davis-Monthan Air Force Base, AZ	Barnwell, SC	82
Fort Huachuca, AZ	Richland, WA	20
Arizona National Guard, AZ	Richland, WA	15
United States Air Force Academy, CO	Barnwell, SC	2
Nellis AFB, NV	Barnwell, SC	1
Kirtland AFB, NM	Barnwell, SC	3
F.E. Warren AFB, WY	Barnwell, SC	2
	Total	125

QUESTION NO. 2:

In the event that the Rocky Mountain Compact Board should decide that the orderly management of a regional disposal site, including the management of the quantities and types of waste to be disposed of at the site, necessitates some mutual understanding between the Compact Board and DoD concerning the amounts and types of waste to be disposed of by DoD at the site, would the Department be agreeable to entering into such an agreement?

ANSWER:

Yes. The Department of Defense would be agreeable to entering discussions with the Rocky Mountain Compact Board. Mr. Leonard Slosky, Executive Director, Rocky Mountain Low-Level Radioactive Waste Board, and I have met and talked several times. Depending on the specific provisions, I believe DoD and the Rocky Mountain Compact Board could negotiate a mutually acceptable agreement or understanding.

QUESTION NO. 3:

Is the Department agreeable to complying with the same terms and conditions (including payment of taxes or fees) that are applicable to the disposal of commercially generated low-level waste?

ANSWER:

Yes. The Department of Defense is agreeable to paying the same charges for low-level radioactive disposal as any private parties. However, because federal activities are normally precluded by law from paying State taxes, we recommend that Congress explicitly authorize federal activities to pay the same charges, including all fees and reasonable service surcharges, that all other disposal site users must pay.

QUESTION NO. 4:

Under what circumstances would it be necessary for the Department to dispose of waste generated outside of the Rocky Mountain region at the Rocky Mountain disposal site? If each region were to provide sufficient capacity for these wastes to be disposed of within the region, would such interregional arrangements be necessary?

ANSWER:

In the event that a disposal site in a neighboring region was not available, and if the resulting unavailability of disposal capacity clearly had an adverse impact on the defense mission, DoD would be forced to seek alternative means of disposal. The alternative means could include temporary shipments from the affected activities to disposal sites in a neighboring region. It is possible that would involve shipments to a Rocky Mountain compact disposal site.

If each region provided sufficient capacity, DoD would not ship low-level wastes outside any region. However, we think that authority to ship outside a region is still necessary because any site could be closed unexpectedly and national defense considerations may require disposal of the low-level radioactive waste at the generating DoD activity. We propose the Compact consent language vest in the President, or his designee, the authority to direct disposal of low-level radioactive waste at the nea st site outside the local compact, if the local disposal site was not available, and essential national defense activities could not be conducted without disposal.

Senator SIMPSON. Mr. Sjoblom, please.

STATEMENT OF GLEN SJOBLOM, DIRECTOR, OFFICE OF RADIATION PROGRAMS, ENVIRONMENTAL PROTECTION AGENCY

Mr. SJOBLOM. Yes, sir. I am Glen Sjoblom, Director of EPA's Office of Radiation Programs, and I appreciate the opportunity to appear at this hearing on the Rocky Mountain low-level waste compact.

I would like to paraphrase my complete testimony and ask that it be inserted in the record.

Senator SIMPSON. Without objection, so ordered.

Mr. SJOBLOM. The EPA does not have a direct role in the formulation and development of the compacts themselves. EPA is responsible for developing environmental standards and guidelines to protect human health and environment due to the management and disposal of low-level radioactive waste.

Consequently, we are quite interested in the formation of the compacts and have been following their progress. The States involved in the Rocky Mountain compact are particularly fortunate in having an existing disposal site that appears to meet the current criteria.

I would like to cover in my testimony today the three areas in which your letter to the Agency are requested that we address, and those briefly were, the Agency's intention to get generally applicable standards for low-level waste disposal, why the rulemaking project is not expected to create a disturbance in the process of enacting compacts and getting new sites, as well as a brief discussion of the relationship between the Agency's authorities under the Resource Conservation Recovery Act, and the management of radioactive waste.

EPA LOW-LEVEL RADIOACTIVE WASTE DISPOSAL STANDARD

With regard to the first area, as you know, in August the Agency published in the Federal Register in its intent to develop and promulgate generally applicable standards for low-level radioactive waste disposal. EPA is charged with developing radiation protection standards by the Atomic Energy Act and Reorganization Plan No. 3. This authority directs EPA to establish generally applicable standards for the protection of the general environment. The act does not provide EPA with any specific timetable for regulating low-level waste or other sources of radiation exposure; rather, through the act, Congress provided the responsibility to periodically examine the sources of radiation exposure to man from activities involving source by-product or special nuclear material, and to initiate the promulgation of standards as necessary to assure the protection of public health.

Under this authority, the Agency promulgated standards for disposal of uranium mill tailings during this past year, and proposed standards for the disposal of high-level radioactive waste and geological repositories. Those standards for highly level radioactive waste should be promulgated in the next 2 months.

After extensive review and evaluation, we concluded that there were persuasive reasons to proceed on the low-level waste program in spite of previous delays at EPA, and even though the NRC had promulgated its licensing requirements. When I came to EPA about 1½ years

ago, I recognized the very large challenge; I had to work off a backlog of delayed projects. And I am dedicated to do that.

The limits under these standards will be derived weighing the potential environmental and human health impacts, as well as the costs of disposal of radioactive wastes. We believe this direct and deliberate approach will promote a sound scientific and technical rational to develop the national standards. We are involving a broad spectrum of expertise from other agencies, the States, and the private sector. We are focusing now on a peer review of our mathematical models for land disposal environmental transport.

We hope and expect this approach will achieve a needed credibility for the standards in the technical community. We also believe conducting this rulemaking will increase the public confidence in the efforts of the Federal Government to foster reasonable solutions to this problem. We believe that with an EPA general standard, there will be an improved public assurance and acceptance that disposal of low-level radioactive wastes will adequately protect current and future populations.

Additionally, the EPA low-level standards will apply to all disposal facilities in the Nation. This includes not only those licensed by the States and by NRC, but those owned and operated by the Federal Government which now annually accept about 50 percent by volume of the waste in the country.

The NRC regulations really only apply to the disposal in the compact States by commercial and other generators. It is our belief, and we have received very extensive support from the public in response to our Federal Register announcement of the need for an overall national standard.

During the development of our standards, EPA will attempt to identify and establish a criteria for a level below regulatory concern for low-level radioactive wastes which contains only very small quantities of radioactive materials. Hopefully this might appreciably reduce the volume of waste that would have to be handled at the low-level radioactive burial sites, and thereby promote an extension of the useful life of these facilities.

Many respondents to our advance notice stated such guidance is needed from EPA and have commended the Agency for efforts to develop the same. The staff of the NRC has also encouraged us to pursue this matter.

POTENTIAL IMPACT OF EPA STANDARD ON COMPACTS

On the second point, namely the potential impact that the EPA efforts may have, perhaps, in regard to the compact process, we received, I believe, 5 letters out of 80 in response to our Federal Register expressing this concern to one extent or another.

This is a matter we have carefully considered, and we have concluded that any such disturbance is unlikely. We have discussed this with groups involved in the process and most recently representatives of Texas Low-Level Radioactive Waste Disposal Authority, and representatives of the Southeast Interstate Low-Level Radioactive Waste Management Commission. And we believe they agreed with our conclusion.

And to help provide assurances to all the other compacts, we asked that the gentlemen from the Southeast compact write us a letter expressing those concerns so that we could respond in writing, and that he provide us a list of his counterparts in the other compacts so that we might provide our comments to them, as well. And with the chairman's agreement, I would like to insert that correspondence in the record.

Senator SIMPSON. Without objection, so ordered.

[The aforementioned letters follow:]

SOUTHEAST INTERSTATE LOW-LEVEL RADIOACTIVE WASTE MANAGEMENT COMMISSION

3100 Ithica Street
Durham, North Carolina 27707
(919)684-3773
(919)489-8292

Captain William H. Briner
Secretary-Treasurer

22 November 1983

Mr. Joseph A. Cannon
Assistant Administrator for
Air, Noise and Radiation
U.S. Environmental Protection Agency
401 M Street, S.W.
Room W937, Waterside Mall
Washington, DC 20460

Dear Mr. Cannon:

I wish to bring to your attention the great concern that has been generated throughout the country regarding the EPA Advance Notice of Proposed Rulemaking in the area of Environmental Protection Standards for Low-Level Radioactive Waste Disposal (40 FR 39563). As you know, the Low-Level Radioactive Waste Policy Act of 1980 (P.L. 96-573) assigned to each State the responsibility for providing availability of capacity, either within or outside the State, for the disposal of all low-level radioactive waste generated within its borders, with two exceptions. In addition, the Act indicated that this waste can be most safely and efficiently managed on a regional basis and authorized States to enter into compacts for the operation of such regional disposal facilities. At the present time, there are 6 viable interstate compacts in varying degrees of the negotiation/ratification process, and 4 of these 6 have requested the consent of the Congress for implementation. Two States (Texas and California) appear to have chosen an "independent state" approach to the solution of their low-level radioactive waste disposal problems.

As you also know, on 27 December 1982, the Nuclear Regulatory Commission published its Final Rule on Licensing Requirements for Land Disposal of Radioactive Waste under Title 10 CFR Parts 2, 19, 20, 21, 30, 40, 51, 61, 70, 73, and 170 (47 FR 57446). Part 61, which deals entirely with Licensing Requirements, became effective on 26 January 1983. Technical requirements of this Rule have been deemed matters of compatibility and thus must be embodied in Agreement State Regulations as well. This Final Rule was preceded by an ANPRM (43 FR 49811) and a Proposed Rule (46 FR 38081), each of which provided for a great deal of assistance and comment, from both the public and private sectors, in the rulemaking process. Indeed, it is my understanding that EPA participated in this total process and encouraged NRC to promulgate the Final Rule. There resulted a body of regulations with appropriate regulatory philosophy and performance objectives which has received broad concurrence and acceptance from those who are affected by its provisions. Even more importantly, since the regulatory philosophy of the Commission was well-known to those who would ultimately be regulated under Part 61, even before the Final Rule issued, it was possible

for many States to use this knowledge in the very early planning stages, as well as in later compact-negotiating sessions.

The basic problem with the EPA ANPRM is its lack of timeliness, however unintentioned or unavoidable that might be. At the present time, only 3 shallow land disposal facilities are in operation; 1 of these has an established closure date of not later than 31 December 1992. Obviously, additional sites are required, and activity related to new site locations, permitting, and development is already underway. This work, in the organized compacts now before the Congress for consent and in the "independent states," is proceeding in accordance with the provisions of 10 CFR Part 61.

It is a rather lengthy process, involving 6-7 years, to establish a shallow land disposal facility. The uncertainty regarding the nature of the EPA Final Rule, now a minimum of 1 to 2 years away, can only result in delays in new site development in organized compacts and "independent states," as well as similar delays in the formalization of the 2 remaining compact areas or regions. Clearly, the Nation can ill afford any further delay in this critically important matter, particularly if any part of that delay is due to an apparent confusion regarding the nature of final Federal regulations still to be formulated and codified.

Recent conversations have led me to conclude that there are two ameliorating actions the Agency can take. First, affirm that the EPA regulatory philosophy to be embodied in the Final Rule on Environmental Protection Standards for Low-Level Radioactive Waste Disposal will be similar to, and no more restrictive than, that of the NRC in 10 CFR Part 61, although clearly the EPA rule may be broader in scope.

Secondly, affirm that the EPA will consider publishing in the Federal Register as expeditiously as possible a clarifying note to the EPA ANPRM (Docket No. R-82-1) indicating that the Agency is in agreement with the NRC regulatory philosophy, performance objectives, and limits contained in 10 CFR Part 61.

Those who are noted to receive a copy of my letter are individuals who are either principals in the 6 interstate regional compacts or negotiating States, or are in positions of responsibility in the two "independent states." I would suggest that these persons be designated to receive a copy of your response to my letter.

Your thoughtful consideration of these suggestions will be sincerely appreciated. We will follow with great interest the rulemaking process of the EPA in low-level radioactive waste disposal matters.

Respectfully,

William H. Briner

Captain William H. Briner
United States Public Health Service (Retired)
Commissioner (North Carolina)
Secretary-Treasurer

WHB/rg

cc: see page 3

cc: Mr. Glen L. Sjoblom, Director
EPA Office of Radiation Programs
Crystal Mall Bldg. 2, Rm. 1016
Washington, DC 20460

Mr. David Stevens
State of Washington
Governor's Office
Legislative Building
Olympia, Washington 98504

Mr. Hall Bohlinger
Deputy Assistant Secretary
Louisiana Office of
Environmental Affairs
P.O. Box 44066
Baton Rouge, Louisiana

Mr. Lee Jager, Chief
Bureau of Environmental
& Occupational Health
Michigan Department of Health
3500 North Logan
Lansing, Michigan 48909

Mr. Leonard Slosky
Executive Director
Rocky Mountain Low-Level
Radioactive Waste Board
Governor's Office
127 State Capitol Building
Denver, Colorado 80203

Ms. Mary Hart
Executive Assistant to
the Governor
State Capitol
Hartford, Connecticut 06115

Mr. Lawrence R. Jacobi
General Manager
Low-Level Radioactive Waste
Disposal Authority
Suite 175
1300C East Anderson Lane
Austin, Texas 78752

Mr. Joseph O. Ward
Chief, Radiologic Health Branch
State of California
1232 Q Street
Sacramento, California 95814

Mr. Alan S. Johnson
Under Secretary, Executive
Office of Environmental Affairs
Suite 2000, 100 Cambridge Street
Boston, Massachusetts 02133

Mr. Gene J. Gleason
Director, Planning Bureau
New York State Energy Office
Agency Building No. 2
Empire State Plaza
Albany, New York 12223

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

DEC 29 1983

OFFICE OF
AIR, NOISE AND RADIATION

Captain William H. Briner
Secretary-Treasurer
Southeast Interstate Low-Level Radioactive
Waste Management Commission
3100 Ithica Street
Durham, North Carolina 27707

Dear Captain Briner:

This is a response to your letter of November 22, 1983, in which you indicate a concern that the Environmental Protection Agency (EPA) planned development of a low-level radioactive waste (LLW) disposal standard may lead to delays in new site development and regional compact formalization. We also would be greatly concerned if either of those circumstances were to result. You should recall that in our meeting on November 2 we agreed that is not likely to occur, and I asked you to write me in regard to this matter so that the basis for this conclusion could be more widely recognized by others who may have had this concern.

First, let me point out some of the pertinent differences between the EPA standard-setting authority and the requirements established by the Nuclear Regulatory Commission (NRC) in their 10 CFR 61 regulation. The EPA has the authority to issue generally applicable environmental radiation protection standards for the disposal of LLW under the Atomic Energy Act of 1954, as amended, and Reorganization Plan No. 3 of 1970. A standard developed under this authority would establish numerical limits on radiation exposures or levels, or concentrations or quantities of radioactive material in the general environment outside the boundaries of locations used for LLW disposal. We will not be setting any of the prescriptive design or site selection type criteria that are included in 10 CFR 61. This EPA authority and our intention to set standards for LLW disposal were well understood by the NRC while they were in the process of developing and promulgating 10 CFR 61. For this reason, the NRC staff often referred to their proposed annual dose limits as surrogates for the environmental standards that they anticipated would be promulgated by EPA.

NRC regulates the low-level radioactive waste disposal facilities at the design phase and while in operation. The NRC regulations would also assure the site will meet EPA standards establishing long-term environmental protection criteria for the time after the facility is closed.

The EPA LLW standards will set environmental protection limits based on an analysis of the potential environmental impacts and the costs of the land disposal of LLW. In contrast, the NRC 10 CFR 61 adopted a surrogate protection limit of 25 mrem per year primarily based on EPA environmental standards for the uranium fuel cycle. However, EPA developed those standards based on an evaluation of the risks, cost, and effectiveness of control measures for all facilities in the uranium fuel cycle except for waste disposal.

A further distinction between the NRC regulations and an EPA standard is that the EPA LLW standards will be generally applicable to all land disposal methods and will be derived from analyses of at least eight disposal methods, whereas, the NRC analyses for 10 CFR 61 only covered shallow land disposal. The NRC staff has indicated a desire to develop regulations covering other methods of disposal of low-level waste in the future, and this should be done if possible within the framework of a national environmental protection standard developed by EPA in accordance with the Atomic Energy Act.

Additionally, EPA LLW standards will apply to all disposal facilities. This includes facilities owned and operated by the Federal Government, which now accept approximately 50% by volume of all LLW disposed of in the United States. The NRC standards apply only to disposal facilities licensed by the States and NRC.

Because of concerns such as you have raised, we were very careful to include the following words in our Agency review of the NRC draft 10 CFR 61:

> Setting an individual exposure limit at the site boundary is appropriate. The 25 mrem per year is in the correct range of values if, as the NRC indicates, the range includes 1 to 25 mrem per year. We are assured by the NRC analyses and their own statements in the DEIS that they should be able to establish a regulatory limit compatible with any future EPA standard established using ALARA principles.

Subsequently, in the preamble to their final 10 CFR 61, NRC agreed with the above EPA assessment, stating that:

> Based on the Commission's analysis, NRC does not anticipate any need to change the technical requirements of part 61 to meet a future EPA standard.

This formal interchange is, of course, only a part of the basis for our belief that an EPA LLW standard development should not disturb the LLW site selection and development process. We have been working very closely with NRC over the years on LLW matters and have found ourselves in close agreement on most issues. In 1980 we reviewed the site selection guides we had issued in 1974 and found very close

agreement with those of the NRC. As these guides will serve as a basis for our tecnnical evaluation of potential releases from disposal sites, we believe that any site selected using NRC 10 CFR 61 site selection criteria should in all respects meet EPA requirements.

It can also be expected, of course, that an EPA standard for low-level radioactive waste disposal would lead to some changes in the NRC regulations. For example, we are expecting to develop criteria for a level "below regulatory concern" as a part of our standard. If this is successful, it would establish a basis for NRC to deregulate various wastes relative to their radioactive content. This would obviously require changes to be made in the 10 CFR 61 regulations. At present NRC is well aware of this effort and is cooperating with us.

At your suggestion, we are sending copies of this reply to all those that you listed in your letter. We are also sending copies to the Chairman and Executive Secretary of the Conference of Radiation Control Program Directors and a copy to the NRC. We hope that this will lead to a broader understanding of our perspective on any potential impact of EPA low-level waste disposal standards on present NRC regulations in this area. We would appreciate hearing the views of any of the copied correspondents.

We do not believe it is appropriate to issue a separate Federal Register notice on this matter at this time. We would certainly expect to discuss the interaction of our proposed standard with NRC regulations as a part of the preamble to the proposed LLW standard when it is publisned in the Federal Register. This would also allow us to be more specific regarding the various parts of our proposal. We would appreciate your suggestions as to other places or forums where we might explain our perspective on potential interactions of our standards and NRC regulations.

I want to thank you for the considered presentation of your concerns. If you or the States of the Southeast Compact identify any further points of view, please feel free to contact me.

Sincerely yours,

Original signed

Joseph A. Cannon
Assistant Administrator
for Air and Radiation

cc: Mr. David Stevens
State of Washington
Governor's Office
Legislative Building
Olympia, Wasnington 98504

Mr. Hall Bollinger
Deputy Assistant Secretary
Louisiana Office of
Environmental Affairs
P.O. Box 44066
Baton Rouge, Louisiana 70804

Mr. Lee Jager
Chief, Bureau of Environmental
and Occupational Health
Michigan Department of Health
3500 North Logan
Lansing, Michigan 48909

Mr. Leonard Slosky
Executive Director
Rocky Mountain Low-Level
Radioactive Waste Board
Governor's Office
127 State Capitol Building
Denver, Colorado 80203

Ms. Mary Hart
Executive Assistant to the Governor
State Capitol
Hartford, Connecticut 06115

Mr. Lawrence R. Jacobi
General Manager
Low-Level Radioactive Waste
Disposal Authority
Suite 175
1300C East Anderson Lane
Austin, Texas 78752

Mr. Joseph O. Ward
Chief, Radiologic Health Branch
State of California
1232 Q Street
Sacramento, California 95814

Mr. Alan S. Johnson
Under Secretary
Executive Office of Environmental Affairs
Suite 2000, 100 Cambridge Street
Boston, Massachusetts 02133

Mr. Gene J. Gleason
Director, Planning Bureau
New York State Energy Office
Agency Building No. 2
Empire State Plaza
Albany, New York 12223

Mr. Charles M. Hardin
Executive Secretary
Conference of Radiation Control
Program Directors
65 Fountain Place
Frankfort, Kentucky 40601

Mr. Albert J. Hazle
Chairman, Conference of Radiation Control
Program Directors
Colorado Department of Health
Denver, Colorado 80220

Mr. Robert Browning
Director, Division of Waste Management
(MS 623-SS)
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

bcc: Mr. H. Richard Payne, Region IV

Mr. SJOBLOM. Present compacts efforts are being pursued in line with the prescriptive requirements of the NRC rules, and we do not intend, as we have stated many times, to establish any prescriptive design requirement s as was used here earlier today.

We do plan to formally propose our low-level waste standards in mid-1984, and we hope to finalize them in 1985. As part of the preamble to our proposed standards, we will thoroughly discuss, again, the specific relations with the NRC existing regulations. We hope this will assure people that no perturbation will result.

RCRA AND LOW-LEVEL RADIOACTIVE WASTE INTERACTIONS

On the third matter regarding the Agency's regulations under the Resource Conservation and Recovery Act, and their potential relationship with low-level radioactive waste disposal, I believe this issue as well will resolve itself in a satisfactory manner.

Let me explain the types of waste which are under consideration. Those wastes whose only contaminant is source, special nuclear, byproduct material are specifically exempt from the regulatory purview of RCRA by the act itself. So that is not a problem. Those radioactive materials that are natural radionuclides such as radium, or are accelerator produced, such as beryllium-7, are subject to the regulation under RCRA and not under the Atomic Energy Act. However, at the present time, there are no RCRA wastes listed because they are radioactive, nor is radioactivity a RCRA hazardous characteristic.

The other type of waste that we have been discussing with the NRC are those wastes which include both radioactive wastes, as well as hazardous wastes. And for which the law requires that they be handled in a manner, in effect, consistent with both the Atomic Energy Act, and with RCRA. EPA and NRC agree on the need for further evaluation as to their nature, source, and quantity. We are working together.

We have a draft of a memorandum of understanding to promote this relationship, and until these efforts proceed further, EPA is not, I repeat, is not regulating under RCRA any waste stream that is both hazardous and contains source or special nuclear or byproduct material.

And I believe, in closing, that both the EPA Office of Radiation Programs as well as its Office of Solid Waste has staff that are working closely with the NRC to arrive at a reasonable interface between the regulatory functions of the agencies.

Again, I appreciate the opportunity to appear before the committee, and I hope I have clarified matters in a way that alleviates, at least, some of your concerns.

Answers to some of the other specific questions the committee asked in its letter to the Agency are included as an attachment to my submitted testimony. I will be pleased to try to answer any questions you may have.

[Prepared statement follows:]

STATEMENT OF

GLEN L. SJOBLOM, DIRECTOR

OFFICE OF RADIATION PROGRAMS

U.S. ENVIRONMENTAL PROTECTION AGENCY

Mr. Chairman and Members of the Committee:

I am Glen L. Sjoblom, Director of the Office of Radiation Programs in the Environmental Protection Agency. I appreciate the opportunity to appear at this hearing on the Rocky Mountain Low-Level Waste Compact.

The Environmental Protection Agency does not have any direct role in the formulation and development of low-level radioactive waste regional compacts. EPA is responsible for developing environmental standards and guidelines to protect human health and the environment from any adverse effects due to the management and disposal of low level radioactive waste. Consequently, we are very interested in the development of these compacts and have been following their progress. The States involved in the Compact under current review have been fortunate to have an existing disposal site that appears to meet current criteria. We note that some other regions have not been so fortunate and that their progress is much slower.

My testimony today will cover three areas as indicated by the committee in its request to participate in this hearing: 1. Environmental Protection Agency intention to set a generally applicable environmental standard for low-level radioactive waste disposal, and why we think that effort is vital to the nations program for safe disposal of low-level radioactive wastes. 2. Why this rulemaking project is not expected to create a disturbance in the process of States siting and developing low-level waste disposal facilities; and 3. A brief discussion of the Agency's present status in determining the appropriate relationship between its authorties under the Resource Conservation and Recovery Act (RCRA) and management of radioactive waste.

EPA LOW-LEVEL RADIOACTIVE WASTE DISPOSAL STANDARD

On August 31, 1983 EPA published in the Federal Register an Advance Notice of Proposed Rulemaking indicating its intention to promulgate environmental radiation protection standards and/or guides for the land disposal of low-level radioactive waste disposal to protect the public health and the general environment from potential adverse effects from this activity. We also indicated that in this rulemaking we intend to determine whether it is appropriate to establish an exposure cut off below which regulation of radiation exposure from the disposal of low-level radioactive waste is not warranted. The Agency embarked on this rulemaking after thoroughly considering the need for the standard and the related activities of other Federal Agencies and the States.

EPA is charged with developing radiation protection standards by the Atomic Energy Act and Reorganization Plan 3 of 1970. This authority directs EPA to establish generally applicable environmental standards for the protection of the general environment from radioactive material. Such standards could be limits on radiation exposures or levels, or concentrations or quantities of radioactive material, in the general environment outside the boundaries of locations under the control of persons possessing or using radioactive material.

The Act does not provide EPA with any specific timetable for regulating low-level radioactive waste or other sources of radiation exposure to humans. Rather, through the Act, Congress provided the responsibility to periodically examine the sources of radiation exposure to man from activities involving source, byproduct, or special nuclear material, and to initiate the promulgation of environmental standards where necessary to assure the protection of human health. National standards for disposal of radioactive waste, both high-level and low-level, are being developed within this framework. The Environmental Standards for the Management and Disposal of Spent Nuclear Fuel,

High-Level and Transuranic Radioactive Wastes were proposed in December of 1982; they have undergone public comment and hearings, and are now in the process of being formulated for final promulgation early in 1984.

Despite our best intentions, the development of environmental standards for low-level radioactive waste disposal is coming to fruition later than we had originally planned. This delay was necessitated by the press of other urgent business, such as the aforementioned high-level waste disposal standard and standards for the disposal of Uranium Mill-Tailings, both done under the Atomic Energy Act.

The delay in EPA's progress sparked criticism by several groups including GAO in their report entitled, "Regional Low-level Radioactive Waste Disposal Sites -- Progress Being Made But New Sites Will Probably Not Be Ready by 1986," published in April 1983. GAO expressed the concern that EPA's delays might adversely affect the ability for the compacts to be operational in accordance with Congress' mandate. I will discuss this concern in more detail later in my statement.

When our resources commitments allowed us to reembark on the low-level radioactive waste rulemaking we re-evaluated the merits of the project. After extensive review and evaluation we concluded that there were extremely persuasive reasons to proceed in spite of the delays at EPA and even though the Nuclear Regulatory Commission (NRC) had promulgated Licensing Requirements for Land Disposal of Radioactive Waste (primarily 10CFR61) and that some compacts were making considerable progress in becoming operational. I will now address some of the reasons why we believe our generally applicable environmental standard will make unique contributions.

The NRC, in promulgating 10CFR61 in the absence of an EPA standard in this area, adopted a surrogate protection limit of 25 mrem per year. This was primarily based on the limit in EPA's environmental standards for the uranium fuel cycle (UFC). However, we believe the Ad Hoc use of EPA's UFC

Standard is not specifically technically applicable to low-level waste disposal facilities because those limits were derived after weighing the risks, costs, and effectiveness of control measures for all facilities in the uranium fuel cycle except for waste disposal.

The present EPA rulemaking effort is designed to directly examine the scientific technical, social, and economic aspects associated with the land disposal of low-level radioactive waste by several alternatives. The objective of the project is to set environmental protection limits that will prevent any unreasonable risk to human health. The limits will be derived by weighing the potential environmental and human health impacts and the costs of disposal of the radioactive waste. This direct and deliberate approach will promote a sound scientific and technical rationale to support radiation protection limits. We are involving a broad spectrum of expertise from other agencies, the states, and the private sector in the standards development. We are particularly focusing an intensive peer review on our modeling effort. We expect this approach to achieve hign credibility for the standards in the technical community. We also believe that conducting this rulemaking in an open public process will to increase public confidence in the efforts of the Federal government to foster reasonable solutions to the disposal of low-level radioactive waste. After completion of the rulemaking we believe there will be improved public assurance and acceptance that disposal of low level radioactive waste, in accordance with the standards, will adequately protect current and future Americans. We see this matter of public confidence as a potential Achilles heel for all radioactive waste disposal and wish to assist in any way we can to provide deserved assurances.

A further distinction between the NRC regulations and an EPA standard is that the EPA LLW standards will be based on an analysis for all land disposal methods, whereas, the NRC analyses for 10 CFR 61 only covered shallow land disposal. The NRC technical staff had indicated a desire to develop technical requirements covering other methods of disposal of low-level waste in the future, and this should be done, if possible,

within the framework of a national environmental protection standard developed by EPA in accordance with the Atomic Energy Act.

Additionally, EPA LLW standards will apply to all disposal facilities. This includes facilities owned and operated by the Federal Government, which now accept approximately 50% by volume of all LLW disposed of in the United States. The NRC standards apply only to disposal facilities licensed by the States and NRC. It is our belief that all low-level radioactive waste disposal conducted in this country should conform to the same performance objectives.

It should also be noted that EPA standards will take quite a different form than NRC regulations. NRC regulates all aspects of low-level radioactive waste disposal including sitings, design, operation and closure. Their regulations must assure the site will meet EPA standards which will address the long-term environmental protection objectives after the facility is closed. We will not be setting any of the prescriptive, design, or site selection type criteria that are included in 10 CFR 61.

During the development of our standards, EPA will attempt to identify and establish a criteria for a level "below regulatory concern" (BRC) for low-level radioactive waste which contains very small concentrations of radioactivity. Such wastes would not have to be regulated as to their radioactivity. In establishing such a criteria we would be acknowledging that there is some radioactivity in all wastes, including the municipal garbage, and that with proper segregation some of the material now going to radioactive waste disposal sites can be disposed of as normal trash or some other means. Hopefully, this might appreciably reduce the volume of waste that would have to be handled in a low-level radioactive waste burial site.

The Nuclear Regulatory Commission has indicated that they are willing

to consider their licensee's proposals for such deregulation of specific wastes. We believe it is necessary to have some overall criteria, based on public health considerations, so that their decisions will have a basis for consistency and will account for the potential cumulative impact of a series of such deregulations. Many respondents to our Advance Notice of Proposed Rulemaking stated that such guidance is needed and have commended the Agency for its efforts to develop such guidance. The staff of the Nuclear Regulatory Commission have also encouraged us to pursue this effort.

Although the current project is designed to identify whether a Below Regulatory Concern (BRC) can be established for low-level radioactive waste, we may find that lessons learned will enable us to consider a similar cut off for other radiation source categories. To that end, we are hopeful that the project will help pioneer a concept that can provide broader usefulness to the nation in protecting public health and conserving resources dedicated to that objective.

POTENTIAL IMPACT OF EPA STANDARD ON NRC REGULATIONS & COMPACTS

Several of the respondents to our Advanced Notice of Proposed Rulemaking, as well as the questions from this Committee, indicate a concern that the EPA effort to promulgate a standard for low-level radioactive waste disposal may, somehow, disturb the process of regional compact negotiation, disposal site selection, and facility development. No one has described specifically how they see this occurring, but it is clear that there is some concern in some minds.

This is a matter that we have carefully considered and concluded that any such disturbance of the process is unlikely. We have discussed this with groups involved in the process, most recently representatives of the Texas Low-level Radioactive Waste Disposal Authority and the Southeast Interstate Low-Level Radioactive Waste Management Commission, and have

come away from these meetings with this belief unchanged. Let me point out some of our reasons for this belief.

Present compact efforts are being pursued in line with the prescriptive requirements of the Nuclear Regulatory Commission's 10CFR61. As I previously mentioned, we wo not intend to establish any prescriptive requirements.

Relative to the performance objectives in 10 CFR 61 we were very careful to review these at the proposal stage because of our concerns that the system not be subsequently perturbed. Pursuant to this evaluation we were careful to include the following words in our Agency review of the NRC draft 10 CFR 61:

> Setting an individual exposure limit at the site boundary is appropriate. The 25 mrem per year is in the correct range of values if, as the NRC indicates, the range includes 1 to 25 mrem per year. We are assured by the NRC analyses and their own statements in the DEIS that they should be able to establish a regulatory limit compatible with any future EPA standard established using ALARA principles.

Subsequently, in the preamble to their final 10 CFR 61, NRC agreed with the above EPA assessment, stating that:

> Based on the Commission's analysis, NRC does not anticipate any need to change the technical requirements of part 61 to meet a future EPA standard.

The NRC also stated in its analysis of comments in its Final EIS that if and when EPA issues Environmental Standards, the release rates in part 61 will be adjusted if necessary to be consistent and in harmony with the EPA standards.

This formal interchange is, of course, only a part of the basis for our belief that an EPA LLW standard development should not disturb the LLW site selection and development process. We have been working very closely with NRC over the years on LLW matters and have found ourselves in close agreement on most issues. In 1980 we reviewed the site selection guides we had issued in 1974 and found very close agreement with those of the NRC. As these guides will serve as a basis for our technical evaluation of potential releases from disposal sites, we believe that any site selected using NRC 10 CFR 61 site selection criteria should in all respects meet EPA requirements.

It can also be expected, of course, that an EPA standard for low-level radioactive waste disposal would lead to some changes in the NRC regulations. For instance, if we develop a criteria for a (BRC) level as a part of our standard, it would establish a basis for NRC to deregulate various wastes relative to their radioactive content. This would obviously require changes to be made in the 10 CFR 61 regulations.

Because of the concerns that have been raised on the possibility of some disturbance of the process, we are certainly interested in discussing such questions with any of the parties involved in the process. We recently corresponded with the Southeast Interstate Low-Level Radioactive Waste Management Commission along a similar line and sent copies of our response to representatives of other compacts.

We plan to formally propose our low-level waste standards in mid 1984, and we hope to finalize them in 1985. As part of the preamble we will thoroughly discuss the specific relations with the NRC regulations. We hope this will also assure people that no perturbation will result.

RCRA AND LOW-LEVEL RADIOACTIVE WASTE INTERACTIONS

Another area of potential EPA interaction with low-level radioactive waste disposal that has created some concerns is its

activities under the Resource Conservation and Recovery Act (RCRA). I believe that this issue will resolve itself in a satisfactory manner. Let me explain the types of wastes that have been under consideration and the status of resolution at present.

Those wastes whose only contaminant is a source, special nuclear, or by product material are specifically exempt from any regulatory purview of RCRA, by the Act itself.

Those radioactive materials that are natural radionuclides, such as radium, or are accelerator produced, such as beryllium-7, are subject to regulation under RCRA if they should either be specifically listed or if the waste matrix within which they are contained possesses any of the hazardous characteristics listed in the RCRA regulations 40 CFR 261, subpart C. At the present time there are no RCRA wastes listed because they are radioactive, nor is radioactivity a RCRA characteristic.

The other type waste that has been the subject of bilateral discussions between EPA, and NRC are those which are mixtures of source, special nuclear or byproduct materials and materials which are either listed under RCRA or which have RCRA characteristics. The nature and form of these wastes are not well adequately defined at present. EPA and NRC agree that they need further evaluation as to their nature, source, and quantity. We are working with NRC to identify both the wastes and appropriate and effective measures for managing them. In the meantime EPA is not regulating, under RCRA, any waste stream that has both hazardous and source, special nuclear, or byproduct components. Hopefully, the memorandum of understanding that we are developing with NRC will establish adequate methods of protection for all components of these wastes and maintain the present administrative structures while still fulfilling the legislative mandates of the involved agencies.

In closing, let me assure you that EPA, both in its Office of Radiation Programs and in its Office of Solid Waste, has staff that are working closely with NRC to arrive at reasonable interfaces between the regulatory functions of the agencies. Again I appreciate the opportunity to appear before the committee and I hope I have clarified matters in a way that alleviates some of your concerns. Answers to some of the specific questions the committee asked in their request to participate are included as an attachment to my submitted testimony. I will be pleased to try and answer any questions you may have.

QUESTIONS AND ANSWERS/(Sjoblom Testimony)

Question: Under What circumstances, if any, do you envision EPA promulgating standards that apply within the buffer zone of a disposal site; and

Answer:

EPA issues generally applicable environmental standards for radiation protection under the authority granted to it under the Atomic Energy Act of 1954, as Amended, and Reorganization Plan No. 3 of 1970. A standard for the disposal of LLW would,

> establish numerical limits on radiation exposure or levels, or concentrations or quantities of radioactive materials, in the general environment outside the boundaries of locations used for radioactive waste disposal.

This means that EPA's LLW standard will apply to releases outside of the controlled areas of a LLW disposal site. If access to the buffer zone is actively controlled by a fence and other means by a State or the NRC, EPA's LLW standard would not apply to the buffer zone.

If, however, regulatory authorities for the disposal site do not control or relinquish control of the buffer zone, our LLW standard would apply to the buffer zone as part of the accessible general environment. Indeed, if control of the disposal site itself were also relinquished, we believe that the LLW standard would also apply within the former fenceline of the disposal site, itself.

Question: Under what circumstances, if any, do you envision EPA retaining regulatory decisionmaking authority, including the authority to concur in NRC decisions, over the implementation of a general environmental standard?

Answer

The EPA does not have any decision making authority or concurrance rights on how a State or the NRC meets its LLW standard. Our LLW standard will be a performance type of standard under which a State or the NRC will be free to choose the most appropriate technology to meet the standard, so long as there is reasonable assurance that it will be met.

The Agency will, however, be involved at individual sites to the extent it (1) reviews and comments on any Environmental Reports or Environmental Impact Statements before the site is established and (2) collects environmental samples outside of the controlled area for a facility after the site has been established to ensure that the site is performing as predicted. Normally, our environmental sampling around a disposal site would be done with the agreement of the State or at its request.

Question: In the implementation of RCRA for uranium mill tailings sites, EPA has maintained that RCRA requires "no migration of hazardous substances out of the impoundment." Is the "no migration" requirement of RCRA also applicable to low-level waste disposal sites?

Answer

The LLW standard is being developed under the Atomic Energy Act of 1954, as Amended, and is intended to apply to facilities dedicated to the disposal of by-product materials, source materials, and special nuclear materials as defined and regulated by the Atomic Energy Act.

There is no legislative mandate for the LLW standard to be consistent with RCRA. Therefore, the "no migration" requirement of RCRA would not be applicable. In the case of the uranium mill tailings standards (40 CFR 192), consistency with RCRA was a legislative requirement of the Uranium Mill Tailings Radiation Control Act.

Further resolution of specific requirements relative to hazardous constituents mixed with AEA licensed wastes is expected to take place through interagency discussions mentioned in my testimony. In the meantime, EPA will not regulate any waste stream under RCRA that has both hazardous and source, special nuclear, or by-product components.

Senator SIMPSON. Thank you very much, Mr. Sjoblom. Well, let me just begin with some questions directed to Mr. Kerr, and then go down through the various members of the panel.

It would now appear that a number of States are going to miss the 1986 deadline, and that Congress will be faced with having received compacts from some regions, and not from others. I wonder if you might comment on what sort of progress you see being made in some of those other regions? From the standpoint of the NRC, summarize the potential health and safety concerns, if you could, that may arise if some of these compacts should be delayed.

Mr. KERR. Mr. Chairman, I think consistent with the views expressed earlier by various people, there is some urgency that should be attached to the resolution of this problem. I think the approach outlined by Mr. Slosky is a good approach; that is, to come to a resolution amongst themselves, and present Congress with that resolution. I would urge that that be done fairly promptly, within the next 6 to 8 months, which is far in advance of the 1986 date. But I think to relieve the uncertainties of a lot of people about what will be done after 1986, this will be a necessary thing to take place.

I think again, as the others have commented, the four compacts, Central, Southwest, Rocky Mountain and Southeast are progressing along. Hearings have been held on all. Midwest and Northeast are ones not so far along and have not seen fit to submit their compacts to Congress for consent.

As to the potential effects on health and safety, it is of some concern to us that if there is no place for the waste to go from the power reactors, the universities, the hospitals after 1986, it can create potential health and safety problems for those licensees. They have to make some kind of arrangements, whether that is storage on site or some longer-term immediate storage.

Those are all possibilities, but we believe that the best solution is to promptly move toward new disposal sites as soon as possible.

Senator SIMPSON. From your vantage point, does it appear that States are moving toward a resolution of this problem in the negotiations that are now taking place?

Mr. KERR. I have both comfortable and uncomfortable feelings about that. We have attended several meetings of them, with representatives of the NGA, and there is a lot of discussion about it, but at this time there is not a definitive resolution. And to that extent, I am uncomfortable, and why I suggest it move fairly promptly within the next several months.

Senator SIMPSON. Once the Congress approves these individual compacts, what role will the NRC play in their day-to-day implementation; and in particular, what relationship will you maintain with the individual compact boards?

Mr. KERR. We intend to maintain a general awareness of what is going on, and remain available for assistance as they desire it, but on technical and regulatory matters, we expect to deal with the regulatory agencies within the individual States, both agreement and non-agreement States, particularly in things that might be considered for changes to part 61, or other technical matters like that.

Senator SIMPSON. In response to one of the questions which you were asked in the letter of invitation here, you commented on the EPA's recent announcement of its intention to promulgate a general environmental standard for low-level waste disposal sites.

I wonder if you might expand on those comments, and explain more specifically how the NRC's regulations are currently structured, what impact a new standard would have, and why this initiative, in your words, would "Deter the States from entering into compacts, and selecting disposal sites."

Mr. KERR. Well, we feel that our standards that were promulgated in late 1982 are adequate to provide the foundation for licensing new sites. They were developed in terms of some very specific criteria, some performance objectives, financial requirements on licensees, and land ownership activities.

The risk that we run is that ERA, even though we would expect them to be highly consistent, might develop some standard that is a general environmental standard that is different from something that we have in part 61. And the possibility of that change is something that gives concern, I think, to some of the compacts. Are we going to have to address some other possibilities when it comes to siting, and maybe they and others could use that as an argument for waiting on their compact development.

Senator SIMPSON. Well, you have been working with the Rocky Mountain region for sometime on this compact. Are you satisfied that this compact, as modified by the two resolutions that we have seen and that have been adopted by the board, that those adequately insure that the packaging and transportation requirements which are established by the NRC and DOT will continue to be applied on a uniform basis throughout the country?

Mr. KERR. We are very pleased with the actions taken by the Rocky Mountain board, but as indicated in my formal testimony, the commission believes that a combination of those resolutions with some specific consent language that embodies the thoughts in those resolutions will adequately address that concern.

Senator SIMPSON. What steps could be taken to allow individual States within this region to undertake a greater responsibility for the enforcement of the NRC and DOT requirement?

Mr. KERR. We have offered and published for comment a section 274(i) agreement which Governor Herschler referred to this morning. That was intended to respond to the perceived need by some States in the compacts, not necessarily all, that there needed to be a greater inspection effort applied at the source of generation. We do not know whether all States will seek to enter into those agreements, but it was intended to allow them a means to inspect certain NRC licensees for waste packaging, procedures, and transport vehicles.

Senator SIMPSON. In at least one instance, and perhaps two, this compact appears to authorize the compact board, and perhaps the individual compact States to impose civil penalties for certain violations.

What are your views on those specific provisions? In particular, would the compact board and the individual States have the authority to impose civil penalties in the absence of these provisions, and are these two provisions consistent with the current law on Federal/State responsibilities under the Atomic Energy Act?

Mr. KERR. We have not analyzed this in great detail and we may want to spend some more time on the analysis of that. But our preliminary view is that if the inconsistencies between the compact and Federal statutes and regulations are resolved as outlined in our testimony, the imposition of civil penalties by the compact board, for economic reasons, would not confer any additional authority on the board that would conflict with Federal law and regulations on health and safety matters.

Senator SIMPSON. May I ask you to prepare, perhaps, an analysis of that question that I just asked you, based upon the decision of the Supreme Court yesterday in the Kerr-McGee Silkwood decision?

Mr. KERR. We will furnish something for the record, Senator.[1]

Senator SIMPSON. That might be a subject for a lawyer, mightn't it?

Mr. KERR. Since I am not a lawyer, I will call on my best resources.

Senator SIMPSON. You will have fun with that, yes. That may be interesting because they did uphold in certain limited conditions the States ability with civil enalties. Well, just a couple more.

In your testimony—and that will be helpful to me. I really will appreciate that and I will read it and review it personally, after Jim chews on it.

In your testimony, you raised concern about a provision in the Rocky Mountain compact providing party States from exporting low-level waste to other regions after that date of January 1, 1986. Under what circumstances do you envision the need for generators to export low-level waste for health and safety reasons?

More specifically, if the Rocky Mountain disposal site were temporarily closed, could the generators within this region store their low-level waste on site for a limited period of time until the facility were to reopen? I think that is a concern that is valid.

Mr. KERR. Well, most licensees can store for varying periods of time. In many cases, the reactor licensees, perhaps, have more capability to do that, but depending upon how long such a ban were in effect, it could become a serious problem for them.

The other reason why we have that statement in the testimony is that there may be an occasional type of waste where we feel that it would be appropriate to be sent to a dry site as opposed to, say, a wet site. Those might be very rare, but there should be some opportunity to allow that flexibility; and I believe both the Rocky Mountain, as well as other compacts, generally have in their compacts provisions where they can approve exceptions to their restrictions.

Senator SIMPSON. One final question, some States such as Texas, California, appear to be examining this option of taking care of their own low-level waste, rather than joining a compact. Could you just briefly give us a comment on where those States stand, and whether problems are developing there that need to be addressed.

Mr. KERR. Well, it's my understanding that Texas is well along in their process for site selection. They moved by setting up their waste management authority to handle Texas-only waste, and I don't know the precise detail where they are, but they have had a number of public meetings or hearings and they have some regulations put out, they have done a lot of site screening work, and I think they intend to announce a site, perhaps, this calendar year.

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[1] Can be found on page 77.

California, I think, is somewhat different. They only passed legislation last year directing them to proceed with either entering into a compact, or definitely going on their own. They have been very active in recent months, and I understand, have had some discussions with compacts as to whether they might join, but for the moment, I can't say whether their intentions are more serious in terms of going alone or going with a compact. But it's my understanding they are addressing it seriously within their executive agencies.

Senator SIMPSON. Well, I thank you, and I know that you have worked very closely and very effectively with the States, agreement and nonagreement States, and you have certainly been more than cooperative and available in that process, and I want to thank you for that. I am personally aware of that. Thank you.

Mr. Hamric, in March of last year, the DOE testified before this Committee that it did not foresee the need to make its disposal sites available for use by those States that come the year 1986, were not yet a party to an approved compact.

Are you satisfied that the compacts are moving forward at a sufficient pace so that it will not be necessary for DOE to make its sites available to the States on an interim basis?

Mr. HAMRIC. Mr. Chairman, the opinion of the Department of Energy is that the country will not have new low-level waste sites by 1986. We are therefore urging the States to get together and negotiate interregional agreements, with congressional consent and knowledge, to solve the problem for the States that do not have sites. Those agreements are absolutely necessary to take care of all of the Nation's commercial waste by 1986, unless the Department makes its facilities available.

The Department believes that making its facilities available would tend to dampen the efforts of States and regions without sites and compact agreements to move quickly to implement the act of 1980.

Senator SIMPSON. True. Thank you. With the prospect for many of these compacts, that many of them will be responsible for disposing of smaller quantities of low-level waste, developing that is going to increase the per unit cost of disposal. What progress is being made on methods for reducing the volume of low-level waste?

Mr. HAMRIC. We have several grants, three that I'm aware of, in various phases which have the objective of reducing the volume of the waste. Additionally, the Department itself has several waste volume reduction facilities which effect technology transfers. These facilities include metal melting, which reduces the volume of steel vessels and pipes and incinerators. I do not believe that the various compact regions could have these facilities in operation by 1986 or 1987. But before 1990, I believe they can have these types of facilities in operation.

Senator SIMPSON. In DOE's reviews of these compacts, one of the points you have consistently commented on is the need for uniform definition. And you heard our Governor testify earlier today that our focus should be on whether the compact language achieves the same effect as the Federal definition rather than whether it tracks it word for word. If we can resolve these definitions of transuranic wastes, and so on, and Federal wastes, through some form of congressional consent

language, are you satisfied, then, that the Rocky Mountain definitions would meet the intent of Congress? Do you think that's so?

Mr. HAMRIC. Yes, Mr. Chairman.

Senator SIMPSON. You do?

Mr. HAMRIC. Yes, Mr. Chairman, with the suggested changes I've indicated in my prepared testimony.

Senator SIMPSON. I wonder if you might commment on what you see as the most effective way for Congress to address the issues that you have raised in your testimony. Should we amend the compacts, adopt congressional consent language, or merely rely on developing the legislative history through the use of committee reports and Congressional Record?

Mr. HAMRIC. I believe that congressional consent language, clarifying the definition of low-level waste in the areas which Mr. Slosky addressed would be a proper approach.

Senator SIMPSON. Many of the States have expressed concern that the definition of waste contained in the act—which you recall, defines low-level waste by describing what it is not—doesn't really give them sufficient certainty about just what kinds of low-level waste they will be required to accept at their disposal sites. This, I think they indicate, has led them to adopt definitions which might be consistent with the act, but which are more specific. I wonder if you could comment on those concerns.

Mr. HAMRIC. I certainly understand the ambiguity of defining something by what it is not. It is not a good and proper approach——

Senator SIMPSON. Sounds like a congressional approach, doesn't it?

Mr. HAMRIC. I probably shouldn't comment on that at this time, Mr. Chairman. We do have a technical effort underway with our operating contractor in Idaho Falls to attempt to classify waste by its hazard. I think that this effort may help people understand more specifically what low-level waste is, rather than what it is not.

Senator SIMPSON. Well, if this deadline comes and goes without all of the ratification of compacts, it is possible that the compact regions with operating sites will close those sites, leaving the other regions without a place to dispose of their low-level waste. Would you support an initiative by Congress to legislate conditions under which the interim disposal capacity would be available to the States, or is that a matter that should be left to the States to resolve?

Mr. HAMRIC. I believe, first of all, that the States will work this problem out, but I believe that you could give a little push to make sure that the States understand the intent of Congress; and that Congress would like the States to work this problem out. And, as I testified earlier, I believe that the States working the problem out themselves without the Federal Government dictating something to them, really carries the spirit of implementing the act of 1980. But I do believe that the States need to begin now, 1986 is not all that far away.

Senator SIMPSON. I think that's true. It would be easy to simply do what we usually do, in Congress, extend the deadline, you know. To allow more States to come in, and that would serve the advantage of providing time, but really simply, take the pressure off those States who are sitting back now. I don't think that's the right approach.

Mr. HAMRIC. I agree with that, and one thing that I would like to add, Mr. Chairman, is that the States do have several organizations—

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for example, the National Governors' Association—which are in place, so they have a mechanism for working this problem out.

Senator SIMPSON. I think they are at it, and I think that is true. Thank you very much.

Colonel Daley, I have just a few questions here. As I understand your testimony, the only circumstance under which DOD would seek to dispose of low-level waste generated in one region at the disposal facility of another region would be where there might otherwise be an adverse impact on critical national defense activities. Are you saying that DOD would not ship to another region simply because it might be more economical to do so?

Lieutenant Colonel DALEY. That's correct.

Senator SIMPSON. You are saying that? I thought you were. In the event that a regional facility were to close temporarily, does DOD have sufficient capacity at the site of its generators to store its waste for an interim period of time until the facility is reopened, or would this be a circumstance under which DOD would seek to send the waste to another regional disposal site?

Lieutenant Colonel DALEY. At the majority of our locations, we do have some storage capacity. However, we do have some special occasions where that is not the case. For example, at Charleston, where we have a lot of naval activity and rather limited space, there may be a problem. Also, at some of our smaller facilities, for example, the Department of Defense medical school in Bethesda, have a small amount of space, but they do a tremendous amount of medical work which produces medical diagnostic and research and medical operations program waste. The number of these places is limited; at most places, we do have storage capacity for a number of months.

As you may be aware, in 1980, the whole country went through an exercise of finding out how big their pockets were, when there was a temporary moratorium on receipt of wastes by the national disposal sites. And we didn't have too much problem at that time, because other sites were open and available to us.

Senator SIMPSON. What plans does the Department currently have for the disposal of the nuclear submarines, and if land disposal is pursued, where would you intend to take those structures for disposal?

Lieutenant Colonel DALEY. The Department of Defense is engaged in the environmental impact assessment process, and a draft of environmental impact statement has been issued for the disposal of nuclear submarines. Sea disposal is one option considered along with land burial. We have not completed the process and a decision has not been made. In the event that sea disposal is not selected the problems confronted by us by disposing of nuclear submarines would be very similar to those confronted by the nuclear power industry in disposing of their powerplants. We would go through some operation of cutting out the submarine reactor compartment to reduce the wastes that had to be disposed to the minimum volumes practicable.

I might add that our powerplants for our nuclear submarines are physically much smaller and the quantities would be less than that associated with a commercial nuclear powerplant.

Senator SIMPSON. It would be my observation that disposal at sea is already very limited and will continue to become even more limited.

Lieutenant Colonel DALEY. I suspect you are correct, sir.

Senator SIMPSON. So I am sure that's coming. That's just my view. But perhaps it will start a run on the acetylene torches, and they will begin to chop it up, and as you say, begin to dispose of those structures' decommissioned nuclear powerplant facilities. It's a serious problem, though, because it's going to require tremendous areas for disposal.

Lieutenant Colonel DALEY. And the operation itself would be rather complicated.

Senator SIMPSON. That's right. Indeed it will.

You note in your testimony that Congress should specifically direct DOD to pay any fees that might be required by regional compacts. Does DOD currently pay for disposal at commercial sites; and if so, what additional authority would be required there?

Lieutenant Colonel DALEY. Yes, we do pay for complete disposal at commercial sites according to regular commercial rates. The issue is that where a site is operated by a State, a fee could be construed as a tax on the Federal Government by the State. And we have had difficulty resolving this issue in our interactions with States up until now, and I could site a number of examples when we had that problem.

And it just clarifies and makes it much easier for us as an agency to deal with the Justice Department and the Internal Revenue Service and say it is clearly congressional intent that the Department should pay this fee, and just a short statement in the consent legislation that the Department of Defense is authorized, or Federal agencies are authorized to pay fees for disposal of wastes to the States would clarify the problem.

Senator SIMPSON. For the record, would you provide us those situations where you have had difficulty?

Lieutenant Colonel DALEY. Certainly, sir.

[The following information was subsequently supplied for the record:]

FEDERAL AGENCY PAYMENT OF STATE FEES

The Department of Defense has encountered difficulty with payment of state fees or surcharges for disposal of low-level radioactive waste in the States of Nevada and Washington. Without explicit Congressional waiver of sovereign immunity, Federal agencies are without authority to pay state-imposed fees or surcharges because such payments are construed as taxes. Congress explicitly waived sovereign immunity in the 1977 amendments to the Clean Air Act and the Federal Water Pollution Control Act, to permit Federal agencies to pay state fees.

Senator SIMPSON. Onder the Rocky Mountain Compact, individual States are authorized to take "Appropriate enforcement action against those who violate the terms of the compact." Is DOD agreeable not only to complying with the terms of the compact, but in the event of a violation, complying with whatever enforcement actions might be taken by an individual State?

Lieutenant Colonel DALEY. We have, I think, a history of trying to negotiate mutually acceptable enforcement consent plans when we do have violation problems. We would continue this activity, and we would hope to be treated as any private party in our dealings with the State compact. So in that sense, we would be subject to those enforcement actions.

Senator SIMPSON. Finally, I wonder if you might comment briefly on the status of other compacts that you have reviewed from DOD's

perspective, and in particular, whether those other compacts have adequately addressed the concerns that you raise.

Lieutenant Colonel DALEY. I think the other compacts, by and large, are not causing us particular problems. The Northwest Compact had a specific provision in it that was somewhat troublesome with regard to a generating State that might ship wastes into the Northwest compact region in this case the region would have to assume liability for future handling problems. We felt that a generating State would be reluctant to assume any liability for Federal waste generated within that State, and we perceive that as a problem. I think that's the biggest outstanding issue in the category, sir.

Senator SIMPSON. Thank you very much. Very helpful. Mr. Sjoblom, I have visited with you before and I remember that occasion, and shared with you my frustrations at that time, you recall.

Mr. SJOBLOM. And I live with them constantly, sir.

Senator SIMPSON. You are a patient man. I have no rocks to throw, but I want to ask some certain questions.

Mr. SJOBLOM. Great.

Senator SIMPSON. Because I know you will give me an honest response. You have in the past. Because you know how frustrating it is for me in dealing with radionuclides, and uranium mill tailings, and high-level waste standards, superfund and the whole works.

But in response to one of the questions I asked of Mr. Kerr, in the letter of invitation, the NRC indicated that an EPA general environmental standard for low-level waste disposal sites coming now so late in the game, so to speak, could deter the States and compacts in selecting disposal sites. Have any of the States or compact representatives expressed that concern to you?

Mr. SJOBLOM. Yes. I believe it was the Southeast Compact that did, as I indicated earlier, and they came in and met with us on request so that we might discuss the matter.

We have received from Nancy Kirner in the State of Washington a comment in response to our advance notice, just with one sentence or two expressing a concern, but really when we got into this discussion with Captain Briner of the Southeast Compact, Mr. Cannon and I met with him in November, we found that there were areas of misunderstanding that were possibly promoting this concern. And I don't doubt that the concern people are expressing is a genuine one.

However, based on our understanding and our discussions, we feel that the issue is not a real issue at this point, because of the way in which we are proceeding, and because of the relationship our standards have with the licensing requirements of the NRC. We do not intend to set prescriptive requirements, and we have stated that for some time. We simply intend to set a performance standard such as Mr. Slosky suggested earlier today.

During the time NRC was developing its standard, EPA admittedly was supposed to have promulgated this performance standard already. That was the intent of the Agency. The budget cuts in 1981 and 1982, as well as higher priority work, namely the uranium mill tailings and the high-level waste work, however, forced us to dedicate the resources we have to those things.

Nevertheless, at the time—and I might quote something here—in our comments on the NRC regulations, we were careful to include the following words: "Setting an individual exposure limit at the site boundary," as NRC did, "is appropriate. The 25 millirem per year is in the correct range, if, as the NRC indicates, the range includes 1 to 25 millirem per year. We are assured by the NRC analyses and their statements in the draft environmental impact statement that they should be able to establish a regulatory limit compatible with any future EPA standard established in this area."

And then subsequently, when the NRC adopted its rule, its final rule, they stated, "Based on the Commission analysis, NRC does not anticipate any need to change the technical requirements of Part 61 to meet a future EPA standard." And that is, really, down to the meat of this issue, and I feel fairly confident that it is not a real issue, although the concern that people have is genuine.

There are clearly a number of concerns, people legitimately have about getting new sites licensed, hopefully by 1986, or as soon thereafter as possible. And we don't want to impeed that.

Senator SIMPSON. While we have this interesting panel here, let me ask Mr. Kerr, don't the NRC regulations right now include some type of general performance standards along with the general standards?

Mr. KERR. Yes, the 25 millirem standard is in there. That's one of the specific ones. Then there are a number of others, but that one is probably one of the key ones.

Senator SIMPSON. So that we have performance standards in the NRC's effort, and now we see an attempt to do that again; is that what we see?

Mr. SJOBLOM. Well, EPA's low-level standards, as all our standards do, will set the environmental protection limits based on an analysis of the potential of environmental impacts and the cost of environmental disposal. And by contrast, and you may recognize that at the time NRC was doing this, there was a very close relationship between the EPA and NRC efforts, NRC adopted a surrogate protection limit of 25 millirem per year, primarily, at that time, based on the EPA's environmental standards for the uranium fuel cycle, which is 25 millirem per year. These EPA standards, however, had not been developed specifically looking at the low-level waste disposal issue, but rather the rest of the uranium fuel cycle.

Senator SIMPSON. Let me ask you, based upon what you know now, and have analyzed, are the standards that the NRC has adopted acceptable?

Mr. SJOBLOM. We said this at the time, the NRC licensing requirements certainly should be adequate for getting the new sites. No question about that in my mind.

Senator SIMPSON. Let me go on, then I will get back to a couple others. Many States are now on the verge of proceeding with site selection and development under the compacts—and yet I gather are concerned about not only the effect of the EPA standard on the activities, but also when the EPA final standard will be promulgated. When would you expect to issue a final standard?

Mr. SJOBLOM. We hope to issue the proposed standard later this year, and as you know, it takes about 1 year between proposed standard

and a final standard, so we would anticipate issuing a final standard late next year.

Senator SIMPSON. I guess the thing that concerns me, as you point out, and is clear in this record, EPA has already endorsed the NRC regulations, in a sense, which now include a standard for releases to the general environment. What objectives will be met by a separate EPA rulemaking that is bound to reach the same result?

Mr. SJOBLOM. Well, there are two points to be made in that regard. The licensing requirements that NRC has issued have a primary emphasis on the shallow land burial method of disposal of low-level waste. There are other methods that are either being practiced or under consideration by various parties in this country, and so the EPA generally applicable standard would cover those as well. We hope to analyze some eight different ways in which low-level waste either is being or has been or is contemplated to be disposed of in the future, so that as we set a national standard, it will be one that is applicable to all methods of disposal.

And in addition, as I pointed out earlier, the EPA standard would apply not only to NRC and agreement State license sites, but to the Department of Energy sites, as well. And we will then have a national set of performance objectives for low-level radioactive waste disposal, just as we will shortly have for high-level radioactive waste disposal in this country.

Senator SIMPSON. Well, let me ask you this, would EPA be agreeable to focusing on disposal options other than shallow land burial in its standards?

Mr. SJOBLOM. I believe not, sir. In order to achieve the objective of having a national standard, certainly one can't ignore credibly, at lease not in the public view, the major means of disposal of low-level waste.

Senator SIMPSON. But that's what they are doing. That's their job. That's the mission of the NRC.

Mr. SJOBLOM. We only do one part of it, sir, by the law. EPA sets the performance standard, NRC sets all the detailed engineering and licensing requirements to implement that standard.

As I indicated, NRC did adopt a surrogate performance standard in its rulemaking. It had fully intended to adopt an EPA standard. That was not possible due to prior delays in EPA. But because of the way we have worked together on this, the NRC regulations are adequate for licensing of sites and any standard that EPA adopts should not require amending those licensing requirements.

Senator SIMPSON. That's what I am going to ask. Based upon what you know about this, would you envision the NRC having to make any changes in its regulations that would affect the activities of individual States to identify, develop, construct, and operate disposal sites?

Mr. SJOBLOM. I do not. The only change I envision that NRC may want to make after EPA has completed its standard, is related to EPA's intent to set a level below regulatory concern which would allow, in effect, a deregulation of extremely low radioactive content materials, such that those materials could be disposed of by normal means, irrespective of the radioactive content. They could elect to do that in their regulations if EPA had a level, and that would be of some benefit.

Senator SIMPSON. As you already know, there has been a good deal of discussion about the appropriate definition of transuranic waste. And the NRC is not settled at a level of 100 nanocuries. Do you envision an EPA rule affecting that decision one way or the other, or affecting the special regulations that NRC now has in place for disposal of this low-level waste?

Mr. SJOBLOM. Well, I might point out that in connection with the development of the standards and regulations for high-level radioactive waste, the definition of transuranic waste that is being used now in all the Federal agencies is the same, and is 100 nanocuries per gram, and that definition is included in EPA's standard for high-level radioactive wastes. So I think the answer is no, we don't envision a change there.

Senator SIMPSON. Mr. Kerr, what do you have to say, if anything, about this latest discussion that we're having here?

Mr. KERR. Yes; I can't pass up the opportunity to clarify a bit about the 100 nanocuries, because it is a much discussed subject, and I think misunderstood in many respects. What happened was when NRC published its proposed rule, it had a number of 10 nanocuries per gram.

Now, our rule has a class A, B and C type categorization of waste. When we went to final rule, the type A stayed at 10 nanocuries per gram. There was no change. But we did put in, after further analysis and public comments, the 100 nanocuries per gram for the class C waste.

So what has been perceived as a change was really an addition for the higher class wastes. And so, you know, both 10 and 100 are in there. If it's class A waste, it has to be 10. If it's class C, it can go to 100.

Senator SIMPSON. Mr. Sjoblom, finally on that subject, what level of resources do you expect to devote to this effort, this activity?

Mr. SJOBLOM. In our radioactive waste standards branch, we expend about half a million dollars a year on low-level waste.

Senator SIMPSON. Turning to the Resource Conservation and Recovery Act, NRC has again pointed out that its licensees are very concerned about having to meet two sets of requirements from the NRC and EPA, that in some cases are, I think, incompatible. Have any of these licensees' communications indicated these concerns to EPA and is it possible to reconcile these conflicting requirements?

Mr. SJOBLOM. The answer to your first question is yes, there have been communications, and initially it appeared that there was concern that there might be both NRC and EPA involved with the licensee. However, that is not, obviously, the right thing for the Federal Government to be doing. There should be one Federal agency dealing with a licensee, and so I promoted some meetings within the agency as well as within the NRC to attempt to work on this matter.

As you know, the basic—let me call it a problem for now—stems from the act itself. Section 1004, paragraph 27, of the RCRA law excludes from the definition of solid waste source, special nuclear, or byproduct material.

However, section 1006 also states that the Atomic Energy Act and RCRA must be done in a manner such that they are not inconsistent with each other. Now, I'm not a lawyer, but I suspect that some lawyers could spend some time on resolving just what "not inconsistent" means.

Senator SIMPSON. I am sure the NRC and the EPA could do that beautifully. I have dealt with them. The NRC has something called the son of the Administrative Procedures Act, and they can do dazzling things over there. And the EPA is even more dazzling, if you turn it over to the lawyers, I am well aware of that.

Mr. SJOBLOM. As we are aware, the engineering approach that EPA is taking for hazardous waste is to use liners and leachate collections systems, and monitoring for migration toward ground water where NRC's approach is to emphasize segregation at the source, containerization, encapsulation, so as to prevent leachate from maintaining significant contact with the waste.

Both, obviously, have the objective of protecting the environment. However, NRC has not yet looked at the means they are employing to protect the environment from radioactivity as to whether they may be effective for protecting the environment from hazardous materials. It may be that those means don't work as well for hazardous materials, and so this is really the question that we are going to try to address in our work together.

Senator SIMPSON. Let me ask you this: Would EPA be supportive of a legislative effort to clarify this RCRA overlap in the area of radionuclides in the context of what we will be doing with regard to a renewal of RCRA?

Mr. SJOBLOM. Well, we haven't really considered that.

Senator SIMPSON. Sounds like a good idea to me.

Mr. SJOBLOM. I really can't give you a good answer at this time. And as you know, that's a matter under another Assistant Administrator's jurisdiction.

Senator SIMPSON. I wold appreciate it if you would take a good look at that in the Agency before we take any legislation to the floor. Would you do that, please?

Mr. SJOBLOM. I can provide something for the record.

Senator SIMPSON. If you would. That would be very helpful. Just a couple more questions. Governor Herschler pointed out earlier that certain States like Wyoming already regulate the nonradiological environmental impacts of low-level waste disposal sites. Is there a mechanism under RCRA for coordinating your response with existing State regulations so that duplicate requirements can be avoided?

Mr. SJOBLOM. Well, as I have indicated that in the absence of EPA determination to regulate mixed hazardous and radioactive wastes under a national program, the State could have to use some other authority to do so. We have had from our regions a question on this.

Senator SIMPSON. Could you tell me what you are saying when you say the State would have to use other authority? It's using its own authority.

Mr. SJOBLOM. Yes, its own authority is what I'm alluding to. In other words, for hazardous wastes, if the national program doesn't include a certain element, this doesn't preclude the State from including that element in its program under its own authority. That's really all I am saying.

Senator SIMPSON. Is there a confusion under the Mill Tailings Act about the applicability of RCRA?

Mr. SJOBLOM. I don't believe so. That was very clear. Congress made that very clear.

Senator SIMPSON. I guess, you know, in my 5 years of dabbling—and I hear what you are saying, I hear that very clearly about the delay and you are not intending to be restrictive, but I can recall at least four separate sections of the law where EPA's entry was discretionary—or optional. And on each of those occasions, you came in. And not just coming in with standards, but oftentimes with great detail. I am personally aware of that. I can think of radionuclides under the Clean Air Act, the detail has been far beyond what would have ever been anticipated.

Design requirements, I heard you mention that it's not your intention to promulgate design requirements, yet EPA has done that on more than several occasions. You do that with great zeal. I will finish, then you can fire away.

But under the Uranium Mill Tailings Act, you have EPA applying RCRA to active sites, which is so impractical in this State, providing for flooding—the 100-year flood and everything else, liners, that would insure no leakage with an industry that's on the ropes anyway, and the cost to just one mine, I am aware, would be $20 to $30 million to do that one, which means they won't open again.

We have your EPA high-level waste standards under the Waste Policy Act which we are still waiting for, and I know you are pursuing those, but I have never seen the EPA meet a deadline in all my time in Washington. It doesn't matter what administration.

This is not a comment on personalities, but a comment on what you are trying to do, and I admire that, but I think that you have come into an area which is solely the responsibility of the Nuclear Regulatory Commission, which is the public health and safety. That is the mission of the NRC.

And so now, I see these other things, we now have EPA under the Clean Air Act proposing to apply those standards to underground uranium mines—possibly requiring the extensive purchasing of land to comply with that. That's the kind of thing I am talking about. EPA applying Superfund now to certain active uranium mill tailing sites, none of them in this State. The outreach program of EPA—and that's the kindest word I could possibly grasp—is extraordinary. And I fear it, I can tell you that, just by book, page, and hymn number of the things I know since I have been chairing this subcommittee.

I have shared those things with the predecessor, the Carter administration, Anne Gorsuch, Bill Ruckelhaus. I am not fainthearted in sharing those things. But you know, somewhere along the line you have got to get off your butt and let the thing operate and let the primary jurisdictional agency deal. Fire away.

Mr. SJOBLOM. Well, we certainly recognize our role as defined by the Congress in the various laws, be it the Clean Air Act, or the Resource Conservation Recovery Act, or the Uranium Mill Tailings Radiation Control Act, or the Nuclear Waste Policy Act of 1982, requiring us to do specific things, and we certainly wouldn't want to ignore those. I think the relationship between the EPA's radiation responsibilities and those of the NRC, in fact, are complementary, rather than duplicatory, as you indicate.

If you go back in history to the time when the EPA was created, the Atomic Energy Commission, the Division of Environmental Radiation Standards literally was removed from the Atomic Energy Commission under the reorganization plan and placed within the EPA.

Now, when that was done and it was subsequently included in the code by the Congress, charging the EPA with setting the generally applicable standards. These are the performance standards needed to protect the public health. We do not have the authority that NRC does and do not want that authority, to prescribe the detailed means by which the EPA standards would be met.

It has occurred, however, in the Uranium Mill Tailings Radiation Control Act that the Congress directed the Agency to include those requirements of the EPA's RCRA regulations in its standards, and so in that case, as required by the law, the Agency did indeed do more than just set generally applicable standards.

However, in general, we try not to do that. In the radionuclide standards that are required by the Clean Air Act Amendments of 1977, it is our intent to set performance standards. And these would be dose limits, or limits on the releases of radionuclides into the environment, or concentration limits, and those are specifically the three types of performance standards one can have.

Under, however, the Clean Air Act, Congress has directed that the agency go further in some cases. And so, while it's our intent to do this in a manner consistent across the board, specific legislative requirements indicate that is not completely in accord with the mandate of the law, so, with regard to your comment on the regulation of the emissions from underground uranium mines, I would point out indeed that the NRC has no responsibility or authority whatsoever in that area and that has not been regulated.

The milling is regulated, but not the underground uranium mining, and its environmental effects, and so, because the EPA's analysis indicated that was one category that indeed could result in substantial risks, the agency felt that something needed to be done there.

Senator SIMPSON. Well, I do hear that, and I am not trying to be rude, but you know, on each and every occasion, the EPA has always entered the situation under the guise of the public health and safety, and I don't have any quarrel with that, but that is the mission of the NRC in dealing with these materials.

So I am just saying that it would certainly spook me up when I see you getting ready to enter this, when I see that we are going to end up with a time limit where we are going to have stuff beginning to stack up around the United States. And I don't see where that's helpful to the issue. Everybody wants to do something with nuclear wastes, but nobody wants it in their State. Everybody wants to do something with national defense, but they don't want the facilities in their State.

So somebody, you know, we have to, somewhere along the line, it's our job to see that it gets done. And I have the gravest, gravest, gravest reservations that EPA's entry into this particular issue will delay it far beyond anything that I can ever propose. And that's my thought. And I do admire you; you come and you are very able and you have a good background, and we will have another good visit. I like those. You are a spirited chap.

Mr. SJOBLOM. I will take your thoughts back to my peers, and to the agency leaders, and will be glad to discuss them.

Senator SIMPSON. Let me say that your Administrator, Bill Ruckleshaus, has been extraordinarily supportive and cooperative with me. And with this Governor. And I couldn't ask more in the way of listen-

ing, and the professional staff of the EPA are extraordinarily capable. I really do mean that.

But down underneath, again, the procedures that—the tediousness of regulation, is overwhelming. And you don't have any control over that one either. But it does give me great concern, and I am glad we have some of it on the record and you have presented it very well, and I thank you. So, I think that concludes this panel.

[The following was subsequently supplied for the record:]

FOLLOWUP QUESTION TO EPA FOR THE RECORD, SENATE COMMITTEE ON THE JUDICIARY HEARING, JANUARY 12, 1984

Question. "Would EPA be supportive of a legislative effort to clarify this RCRA overlap in the area of radionuclides in the context of what we will be doing with regard to a renewal of RCRA?"

Answer. EPA and the Nuclear Regulatory Commission (NRC) are working closely together so that environmental protection will be assured with regard to radioactivity contained within wastes disposed of at NRC or Agreement State radioactive waste sites, as well as for any hazardous wastes that are mixed with the radioactive wastes.

A Memorandum of Understanding is being developed between the two agencies under which this essentially technical issue can be resolved adequately with minimum overlap. EPA believes this to be an adequate framework for handling this issue and legislative action should not be necessary.

Senator SIMPSON. We have one final witness, Mr. Jerry Scoville, please, if you will come forward. The president of U.S. Ecology in Louisville, Ky. Did I say that properly?

STATEMENT OF JERRY J. SCOVILLE, PRESIDENT, U.S. ECOLOGY, INC.

Mr. SCOVILLE. It's more like Louisville. I am just learning. I have only been there 2 years.

Senator SIMPSON. Thank you very much for that panel. That's very productive material for the record. I—all of you—appreciate it very much.

So, Mr. Scoville, tell us about your activities.

Mr. SCOVILLE. Senator, appreciate being invited to present some thoughts to the committee. I have noticed that I am the only speaker this morning from industry. All of my other peers here are Government, so maybe I will try and, in my comments to——

Senator SIMPSON. You are not frightened by that, are you?

Mr. SCOVILLE. Not at all. I will try to, in my comments, speak for the industry as a whole as opposed to just my company.

Senator SIMPSON. I think that would be very appropriate. We are looking forward to that.

Mr. SCOVILLE. Certainly, my company operates the two low-level waste disposal sites in Washington and Nevada. In our business, we come into day-to-day contact with the generators of low-level radioactive waste. That whole industry, that we have been dealing with here this morning, are our customers. I think we appreciate their problems and concerns, as well as have our own from an operational point of view.

Due to the hour, I am going to skim over my prepared testimony, and ask that it be included in the record.

Senator SIMPSON. Without objection.

Mr. SCOVILLE. I will even skim over the paraphrasing that I have come up with and try to just hit the highlights.

Senator SIMPSON. Feel free to take your full 5 minutes. [Laughter.]

Mr. SCOVILLE. As I said, I think I will——

Senator SIMPSON. Yes.

Mr. SCOVILLE. I have an outline of some highlights. First of all, U.S. Ecology, as a company, supports the concept of regional compacts. We have since its inception. We have had some reservations from an environmental point of view in that we think some regions of the country are probably technically better for disposal sites than others, and those regions do not necessarily correspond to political boundaries. But we certainly recognize the will of the people and the will of the States, and we have been supporting regional compacts since early on.

One of the questions asked in the letter inviting me to be here today was to discuss the issues of greatest concern to companies pursuing site development. We still come up with the same primary concern, No. 1, and that the matter of local opposition to waste facilities generally. I don't know yet what to do about that.

One can suggest siting in remote locations, but our two sites in Washington and Nevada really fit that criteria fairly well. We still, however, have vocal opposition to both of those sites from time to time. I think for us, it's kind of a way of doing business. It's part of the way we expect to be treated.

We try to sponsor community things; you know, baseball teams, lights for the football field, et cetera. We find a lot of friendly local people, but we cannot quiet all of the loud vocal opposition to this kind of activity, and I don't think we, as a business, can ever do that because we are not trusted. I look to our political leadership to help in this area.

Senator SIMPSON. Are we more trusted?

Mr. SCOVILLE. You do get elected from time to time.

Senator SIMPSON. But the trust level may be nearly the same.

Mr. SCOVILLE. I think our political leaders are going to have to take some real statesman-like positions and take some controversial issues in hand, if the regions that do not currently have sites are ever to get sites. Because the local public opposition can just be an overwhelming disruption to the establishment of any new site in any State, that I am aware of.

Another part of that question is, "Can the Northwest, the Central, and the Rocky Mountain regions support sites of their own?" I think we have to give some consideration to what we are really doing here. We are taking a national system of low-level waste disposal, which has been accommodated by three sites, and a majority of the volume by only two sites, and we are going to distribute that to as many as perhaps seven. That's just kind of a guess, because we don't know yet about California, Texas, and a few others. But it could easily be as many as seven.

Well, it is fairly elementary economics that if you do that, and spread the volume out among many separate operations as opposed to having all of that volume in a few, the costs are going to be greater. That goes without saying. The question is how much greater.

Some have referred to a report from the Rocky Mountain group. Mr. Slosky mentioned it, and it's included in his testimony, I believe.

I have had my staff review this report. We are experienced in operating sites, we do it, we buy the machines, we operate the machinery, we pay the bills. We find that that report is inadequate to assess the economics of a site with a low volume of waste.

I have passed on some of our general comments on that report to Mr. Jacka, the director of the Nevada program, and perhaps he can share that with the compact commission. I have no objection to him sharing those comments with the others.

Ours was not an exhaustive review, we just couldn't afford the time, but we know there are serious deficiencies in the report. One that comes up immediately is that the base price quoted for the Barnwell site is really quite significantly lower than that what Barnwell is now charging. So that if we start with that, and then look at equipment costs, and so forth, the report is misleading.

Can they support a site? Certainly they can, but it's going to cost the generators of low-level waste a lot more money to dispose of their waste than it is currently. Everyone ought to know and expect that.

And the generators, when I say the generators of low-level rad waste, ultimately that cost goes right down to the consumer. We are only kidding ourselves if we say the company has to pay for it—the utility has to pay for it or the hospital has to pay for it, or the government has to pay for it, ultimately it's the consumer or the taxpayer. We can expect that that will happen.

Another thing that concerns the economics of sites under the compact system is that we are looking at a monopolistic kind of thing. The regions will not want to have in operation more than one such site, which means that the operator is a little monopoly. We expect, as we see in some of the regulations resulting from compact language, that there will be controls on profitability, on rates that operators can charge, and rightfully so. As a company, I don't object to that.

I wish there were another way, because I appreciate the free enterprise method better, but when you are the only person in a region and have a lock on the market, you certainly expect that kind of control. I just hope that when people begin to wrestle with the questions of what constitutes a fair rate of return, the industrial input will be solicited and perhaps some of our experiences in the past will be used to develop these models for the future.

I can see that as being a serious question when a company such as mine determines whether or not to go into a region to put capital at risk to develop a site. We are going to have to know what rate of return we are going to be allowed, we have to know that up front before we commit the capital.

The other significant area that I think provides a question as to an operator going into a region is another question that has been discussed a lot today, dual regulations of NRC and EPA. In my formal testimony, I have comments relative to what we think EPA should do. If they don't think part 61 is good enough, we think they ought to look at it very carefully and define its inadequacies and address only those rather than starting over in a job that NRC took 5 years to do and solicited comments of all other agencies and members of the public at large in an exhaustive piece of work. I think we ought to start with what has been done and see if there are inadequacies in that before going further.

Now I need to comment quickly on the RCRA problems that we have relative to low-level waste sites. We brought this subject up to EPA 3 years ago, I guess. When reading the law, the RCRA law, we determined that we were required under the law to file something for our low-level rad sites as well as our hazardous chemical sites, and we did make that filing. At the same time we asked for clarification as to whether those sites needed to fall under RCRA or not.

We still don't have the clarification. I think it's closer now than it has been for a long time. I think that Mr. Browning at NRC, and others, at EPA have been working together better than they have for sometime, but certainly that is a major question to anybody considering investing in a site.

For example, does the site need to have a clay liner, or I am sorry, a synthetic liner, does the disposal trench need that? Do you have to have chemical analysis for verification, and if you have to do chemical verification, how do you do that in the spirit of as low as reasonably achievable [ALARA] for radiation as required by the NRC? The inconsistencies are many. I think we are prepared as a company to address all of the inconsistencies since we have been regulated by both RCRA and NRC. We are a licensee under each at various of our facilities.

I will close with that, Senator, unless you have some specific questions.

Senator SIMPSON. Well, that is very helpful, and indeed, you are a very important part of the mix. You and your industry, is what I am saying. You are a spokesman for your industry—those people who in the free enterprise system are doing it.

Just a few questions, very briefly. You indicate that Congress should take the lead in responding to this deadline by conditioning its consent to those compacts that have been submitted upon those regions continuing to provide access to the States that may have not submitted compacts. Do you think that it is Congress responsibility, and not the States?

Mr. SCOVILLE. I believe Congress should have before it some real piece of evidence that the States will work out their differences. We have seen in the Northwest compact examples of what that compact would consider reasonable progress for a nonparty State to have made in order that they can negotiate with the Northwest for disposal. And what seems reasonable to the Northwest might very well be labeled impossible by the other States. So I think that Congress should have examples of those agreements, in writing, so that they can assure themselves that the national system of low-level waste will not be compromised.

Further, I'd like to make a quick comment about interim storage, I recognize that interim storage at the point of generation is probably a reasonable short-term effort that will need to be made while disposal sites are being undertaken. Yet as a human being and citizen and I believe, an environmentalist myself, I really hate to see that last very long. I hate the idea of perhaps thousands of interim storage low-level waste piles around the country. I think that we should not lean heavily on interim storage. I think we should instead promote agreements between disposal sites and get it disposed of rather than have it lying all over the country.

Senator SIMPSON. And yet we both know how we have to go to re-racking and we have to go to all these things because nobody wants to take the material, when we are talking about a nuclear site.

But just one other comment—you spoke about EPA, and its rule-making, and this establishment of a generally environmental standard. And you indicated it causes you concern. Is it principally because of the duplication of what has already been done, or what?

Mr. SCOVILLE. What causes me the most concern is that there could be a standard promulgated that is not contemplated under our existing operation, under our existing license, and would cause some serious problem for us in trying to meet it.

Further, if I were developing a new site, I wouldn't know the criteria under which I should develop it because the standard is not yet there.

I missed mentioning one other thing that I would like to pick up. That is, when we talk about agreements between compacts and those have-and-have-not-type States, those that have disposal facilities and those that do not, everyone should be aware that the Northwest Compact has a couple of provisions in it right now that if a congressional affirmative decision were given today, would come into play because they happen not on the 1986 date, but they happen upon the ratification of Congress. Those two conditions amount to a near prohibition of out of compact waste beginning immediately.

One of them requires that the State of origin, State inspector at the State of origin of the waste, must certify each shipment of waste, and most States don't have those inspectors, nor the capability to do that certification.

Another provision is that the State of origin must indemnify the State of Washington and any compact State, Northwest Compact State, for shipments of waste through it. Most States, or many States are precluded by their constitution from providing that indemnification.

So these two provisions are currently in the Northwest Compact language, would act immediately upon ratification, and would be a prohibition to most States' shipping to the Northwest.

Senator SIMPSON. I would tell you that the committee and subcommittee are very aware of that, and held hearings in Seattle on that very issue, and I think that we have a record there that bears out what you are saying.

Well, while you have discussed the economic issues and the volume, those are very real issues, the volume when you spread it out, and the economic ability to prevail in business, in doing that.

One other question. Do the economics of a facility change in regard to the climate of the area?

Mr. SCOVILLE. Yes, sir.

Senator SIMPSON. Is it reasonable to expect that suitable sites can be found in every one of these regions whose compacts are now under discussion?

Mr. SCOVILLE. Certainly, I think that one can design and license a site in any region in the United States. I think to do so in a humid climate or under certain geophysical conditions would cost a lot more money than in other areas, such as the arid West. But I believe that the engineering can be done, the engineered barriers are there, NRC's

Part 61 defines criteria for various kinds of conditions, and it's my opinion that it can be done anyplace, but it will cost more some places than in others.

Senator SIMPSON. Well, the deadline is coming, and all sites aren't going to be ready, and based upon what you know and the business you are in, can you just say swiftly when one would expect the sites to be licensed and in operation in the various regions?

Mr. SCOVILLE. We hear numbers all the time about 5 years, 3 years, and so forth. Part of the uncertainty in being able to predict the schedule is the uncertainty in the licensing regulations at the various States. Until the licensing regulations are fully promulgated, you can't really determine how many public hearings will be required or what possibility there is for real protracted public hearings. Those are really the uncertainties in scheduling these things.

I think you could talk about fast-track licensing. I believe a State like California, where it seems the full power of the State government is behind doing something about developing a site. I believe you could talk about fast-track licensing where you could do it, maybe, in 1½ years.

Senator SIMPSON. Thank you, very much. You have been very helpful.

Mr. SCOVILLE. It's been a pleasure being here.

Senator SIMPSON. Thank you for coming this distance to participate. Well, I also planned that we would have an opportunity if anyone had anything they wished to share from the floor, within this area, if you have a short statement that you would want to make, or a prepared statement. Anyone that would care to participate in that fashion? Yes?

[Prepared statement follows:]

THE ROCKY MOUNTAIN

LOW-LEVEL RADIOACTIVE WASTE COMPACT

Testimony of

J. J. SCOVILLE, PRESIDENT
US ECOLOGY, INC.

MR CHAIRMAN AND MEMBERS OF THE COMMITTEE:

My name is Jerry Scoville. I am President of US Ecology, Inc., a company that operates two of the three commercial low-level radioactive waste disposal sites in the United States, one near Beatty, Nevada, some 100 miles north and west of Las Vegas in the Amargosa Desert. Our other site is on the Department of Energy's Hanford Reservation in the State of Washington.

I am pleased to be able to accept your invitation to comment on S.1991, a bill to grant the Consent of the Congress to the Rocky Mountain Low-Level Radioactive Waste Compact.

At the outset I want to express US Ecology's full support for the concept of regional compacts for the disposal of low-level radioactive waste. (Exhibit A) The several regions have done a remarkable job in their efforts to reach a consensus of what should or should not be contained in the compacts now before your committee. As the committee knows, the compact program came into being when Congress passed the Low-Level Radioactive Waste Policy Act in 1980 (Public Law 96-573) giving the States the responsibility for disposing of low-level radioactive waste and encouraging them to form interstate compacts and construct regional facilities.

We, too, wish to encourage as well as to assure that regional compacts are established in a manner consistent with the Low-Level

Radioactive Waste Policy Act in order that they will facilitate the handling, transportation and disposal of low-level waste in a safe and cost efficient manner and on a nationwide basis.

While we support in concept the compacts now before your committee, there are a number of issues relating to the success of the compact program which I would like to discuss this morning. Some of these issues are raised in your letter of December 7, 1983 inviting me to testify here today and I would like to touch upon one of them at this time.

You asked what are the issues of greatest concern to those in the private sector who are pursuing siting development within the individual compact regions. In my view, the number one problem facing a company desirous of siting a new low-level radioactive waste site is the vocal opposition of a local populous to a siting in its area. The "not in my backyard" syndrome is literally nationwide. There is no easy answer to this problem other than to attempt to site a facility in as remote an area as possible. Both our sites in Nevada and Washington meet this criteria, yet even in these locations certain groups who are perfectly willing to accept the benefits of our modern day conveniences and medical advances resulting from the use of radioactive materials are not willing to accept the minimal risks attendant to the proper disposal of the low-level radioactive waste generated in the manufacture and use of these products.

There is no easy answer to this problem. Frankness and openness in government, particularly at the state and local level will be important. Incineration, volume reduction, compaction, and temporary storage all will play a role, but for the foreseeable future low-level radioactive waste sites will be required and that requirement must be met.

There is also the question as to whether some of the regions

can economically support a low-level radioactive waste site. For example, the Central States Compact Region generates only 3 percent of the nation's low-level radioactive waste, the Northwest 3 percent, and the Rocky Mountain Region 0.2 percent. In our opinion these three regions cannot provide the services required at a reasonable cost to the generator without benefit of waste from outside their region or taxpayer support.

I can also assure you that we, as well as all site developers, are very much concerned with respect to the potential economics of low-level waste disposal under the compact system. It goes without saying that the same volume of waste which has been supporting three disposal facilities will now have to support the development and operation of at least seven additional facilities.

Further, it is expected that under the compact system disposal sites may be treated much as utilities and some control may well be exercised over their rate structures. The development of these rate structure regulations will be a critical issue in the operation of each new compact and may inhibit any development by the private sector.

I will also address later on our concern over the potential dual regulation of the disposal sites by the U.S. Environmental Protection Agency (EPA) under the Resource Conservation and Recovery Act of 1976 (RCRA) in addition to the U.S. Nuclear Regulatory Commission's (NRC) 10 CFR Part 61, or State equivalent.

I would now like to comment on some of the provisions in the Rocky Mountain Compact, as well as some of the provisions in the other compacts before this committee which are of concern to us.

Management vs. Disposal

The Low-Level Radioactive Waste Policy Act permits the States to enter into compacts to provide for the establishment and operation of

regional disposal sites in contrast to the more broadly stated policy found in the Rocky Mountain Compact. This we view as a common problem found in all of the compacts now before the Senate Committee on the Judiciary.

You will note that in Article I(a), Findings and Purpose, the Rocky Mountain Compact provides for the establishment and operation of facilities for regional management of low-level radioactive waste. This concept is also emphasized in Article I(b), wherein it is stated that one of the purposes of the compact is "to establish the means for cooperative effort in managing low-level radioactive waste."

We believe that Congress only intended compacts to provide for the disposal of low-level waste and thus by the use of language which would provide for the management of low-level waste, the compact takes on a mantle of authority not conferred under the Act. We believe that existing federal and state regulations are already in place and are adequate to properly manage low-level waste generation. Accordingly, the intent of the Congress with respect to disposal versus management should be made clear either in the legislative history or perferably in the consent language approving the Rocky Mountain Compact.

Definition of Low-Level Radioactive Waste

The definition of low-level radioactive waste as contained in the Rocky Mountain Compact is not consistent with the definition in the Low-Level Radioactive Waste Policy Act of 1980 or with 10 CFR 61 of the Nuclear Regulatory Commission's (NRC) regulations. For example, the Rocky Mountain Compact limits the disposal of waste material containing transuranic elements with contamination levels greater than 10 nanocuries per gram of waste material, whereas the NRC in its considered judgment has adopted a limit of 100 nanocuries per gram of waste material. (Exhibit B)

We believe it would be a serious mistake to permit the 10

nanocuries reference to stay in the Rocky Mountain Compact for, if for no other reason, it is not consistent with 10 CFR Part 61 of the NRC regulations or the Low-Level Radioactive Waste Policy Act. While I understand that the Rocky Mountain Low-Level Radioactive Waste Board in August of 1983 increased the 10 nanocurie level to 100 nanocuries, this action by the Board raises a question as to its authority to change the terms of the compact in advance of legislative approval. It also raises the question as to the authority, if any, of the Board to act prior to the consent of the Congress to the compact.

We believe that it is essential in a comprehensive national regulatory scheme to use well understood and consistent definitions. Congress formulated a sound definition of low-level radioactive waste in the 1980 Act and even improved upon it in the Nuclear Waste Policy Act of 1982. The definition contained in the 1982 Act would permit the low-level nuclear waste disposal program to keep pace with changing federal regulatory considerations, provide regulatory consistency and ensure disposal of all forms of low-level radioactive waste. (Exhibit B) Accordingly, it would be our hope that consistent with this view a uniform definition for low-level radioactive waste would be adopted by this committee and find its way into all of the low-level radioactive waste compacts. Therefore, we would urge serious consideration for Congress to include the 1982 definition in its consent language.

Withdrawal

The Rocky Mountain Compact (Article VIII) provides that a State which has become a party State may by legislation repeal its enactment of the compact, but such repeal shall not take effect until two years after enactment of the repeal legislation. However, if the withdrawing State is a host State, any regional facility in that State shall remain available to receive low-level waste generated within the region until five years after the effective date of the withdrawal. But this provision shall not apply and I quote "to the existing facility in Beatty, Nevada." As we read this provision, there is no guarantee

that the Beatty facility will be available to the Rocky Mountain Region until a new host State has been selected and its disposal facility is in operation. You should also be aware that the Nevada Attorney General is engaged in litigation directed toward closing the Beatty site permanently. We point this out only to highlight the problem which generators in the Rocky Mountain Region may be faced with should the Attorney General be successful or the State elects the option to withdraw from the compact under the provisions of Article VIII(d).

Export

Turning to the question of the export of low-level radioactive waste, the Rocky Mountain Compact provides in Article VII(b) that after January 1, 1986, it will be unlawful for any person to export low-level waste which was generated within the region unless authorized to do so by the Rocky Mountain Low-Level Radioactive Waste Board. As you know, the Low-Level Radioactive Waste Policy Act allows the States to restrict only the import of out-of-region waste for disposal in a regional site. While one can understand the economic motives behind this provision, particularly in view of the fact that currently the Rocky Mountain Region only produces annually some 4,607 cubic feet of low-level radioactive waste or 0.2 percent of the national volume, the restriction does go beyond the terms of the Act and could be construed as an unauthorized and unconstitutional burden on interstate commerce. This limitation on export is also found in the Central States and Southeast Radioactive Waste Compacts.

Defense Waste

The Low-Level Radioactive Waste Policy Act excludes from its provisions waste generated as a result of defense activities of the Federal Government or federal research and development activities. The Rocky Mountain Compact in Article I adopts this exclusion verbatim. As you know, other Federal Government activities including some facilities of the departments of Defense, Agriculture, Veterans Administration, and the Environmental Protection Agency generate low-level radioactive

waste. These federal facilities routinely ship low-level radioactive waste to commercial facilities for disposal. In our view it was not the intent of the Congress to alter this practice. While the compact regions have indicated that they would continue to take federal wastes as heretofore, the fact that the Low-Level Radioactive Waste Policy Act excludes such waste makes it imperative that the exclusion be modified to assure that other Federal Government activities unrelated to weapons research and development will be provided for in every compact.

Packaging and Transportation

Article III(f) provides that each party State agrees to conform to packaging and transportation requirements and regulations. One can imply that the reference cited pertains to the packaging and transportation requirements of the host State. However, this is not explicit. It is our view that States properly have a role in the regulation of packaging and transportation activities solely to the extent that such regulations are consistent and compatible with Federal requirements. Variations in packaging and transportation standards could result in a very cumbersome system of interregional requirements that would place an unnecessary burden on waste generators and shippers. Further such a system could render compliance more difficult and thus jeopardize the safe and efficient movement of low-level radioactive waste throughout the country. Accordingly, we would recommend that the language in Article III(f) be modified so that it would clearly indicate that any packaging and transportation standards shall be in accordance with the Department of Transportation (DOT) and NRC regulations.

Dual Inspection

Article III(f) also provides that each party state agrees to adopt and enforce procedures relating to packaging and transportation requirements which would include inspections and appropriate enforcement actions with respect to waste destined for the regional facility. This provision raises the question as to whether or not it could be applied

to NRC licensees. Currently such licensees are subject only to Federal inspection with respect to activities carried out under NRC licenses and federal regulations. Thus a proposal that would imply dual regulation would not only be burdensome for the generator but could result in conflicting regulations and enforcement activities. Under the circumstances, this provision should be expressly modified to exclude NRC licensees.

NORTHWEST COMPACT

July 1, 1983 - January 1, 1986

While the Rocky Mountain Region has available at present the Beatty site for the disposal of its region's waste, there is no assurance that it will be available to the region or to others outside the region even before January 1, 1986, or thereafter. Should this come about, neither the Barnwell nor the Richland site may be available to the Rocky Mountain Compact Region. The reasons are two: one, the Southeast region has a strict volume limitation on the amount of waste going into that facility. Two, the proposed Northwest Compact contains terms which would in effect bar the Hanford, Washington site even prior to the January 1, 1986 date from accepting low-level radioactive waste generated outside the Northwest Compact Region (Exhibit C) unless:

(1) A public official of the non-party State executes a certificate of compliance stating that each shipment has been inspected and found to be in compliance with applicable Federal and State packaging regulations and the regulations of the host State [Article IV (3)(C)]. Comment: Such a mandate would require individual inspection of each shipment of waste and would require the immediate hiring of additional state inspectors in the non-party states where the waste originated. In short, a 100 percent inspection program that, I believe, most states would be unable to adopt.

(2) The certificate of compliance also requires those states not within the Northwest Region to enter into a binding agreement to indemnify any part state in the Northwest Region for liability

or expense resulting from accidental releases [Article IV (3) (d)].

Comment: Many States, I understand, have constitutional prohibitions against providing such indemnification. Also, such a requirement is unnecessary, at least for the State of Washington, due to existing insurance coverage. All waste generators who ship to US Ecology's Washington site are already required by Washington State to indemnify and save harmless that State in an amount up to $5 million. (Exhibit "C")

If these provisions remain in the Northwest Compact they would operate immediately upon Congressional Consent to effectively prohibit receipt of waste at Hanford from generators outside the Northwest region between the period 1984-January 1, 1986. This is contra to the provisions of the Low-Level Radioactive Waste Policy Act which establishes a January 1, 1986 date for the several regions to restrict the import of low-level radioactive waste. Such being the case it is extremely important from our point of view that the concept of regional compacts not be considered in a vacuum but rather as an integrated whole. It is only by doing so that a uniform, consistent, and appropriate regional approach can work on a national scale. Therefore it is recommended that these aforestated provisions should be deleted.

POST January 1, 1986

The Low-Level Radioactive Waste Policy Act provides that after January 1, 1986, any compact region may restrict the use of its disposal facilities to the disposal of low-level radioactive waste within the region. It is obvious to me that the Northeast, Midwest, Central States, and perhaps the Rocky Mountain Region, will not have a site operational on January 1, 1986. It takes three to five years to select, contract and license a waste disposal site and in any given case it could take very much longer. Under the circumstances, it is evident that in order to assure that there is disposal space available for waste generators in the "have not" regions, the three existing sites should be required to continue to provide open access to generators in any non-

party State which has neither a disposal site nor adequate storage facilities, conditioned upon:

(1) The use of on-site (point of waste generation) storage practices for waste generated within the requesting region has been utilized to a reasonable extent.

(2) The non-party States demonstrate that the volume of waste proposed to be disposed of has been reduced through economically feasible volume reduction techniques.

(3) The non-party States demonstrate ascertainable progress is being made toward either a state or regional facility.

It has also been pointed out that the January 1, 1986 exclusionary date is not sacrosanct in that either the Compact's Commission, Board or Committee charged with the administration of the regional programs can grant relief from the January 1 date. As a matter of fact, there has been some testimony in earlier hearings that the States are in effect working on post January 1, 1986 agreements which would accommodate the "have not" States. It is our view that these agreements should be fully executed and made available to this committee prior to the consent to any of the compacts received to date. In short, these agreements should clearly spell out the conditions for the receipt of waste after 1986, and would provide the Congress the opportunity to determine whether proposed arrangements were adequate to accommodate the needs of those generators who will need the use of existing waste sites prior to the construction and operation of disposal sites within their own respective regions.

The flexibility recommended above is needed if the Northwest, Midwest and Central States, and perhaps the Rocky Mountain States, are to be assured of having a waste disposal site available after January 1, 1986. It is particularly important that the Northwest Compact contains

such flexibility inasmuch as the majority of the waste generated in the Northeast and Midwest is shipped to the Hanford, Washington site. In 1982 the Hanford site received 62.1 percent of all waste generated in the Northeast and 72.2 percent of all waste generated in the Midwest.

We bring these matters to your attention, for it is our belief that at this stage of the development of the regional compacts there must be room for accommodation between the various compact regions. It would serve little purpose to consent to those compacts in regions with already established sites without taking cognizance of the fact that without the modifications I have recommended, generators of low-level radioactive waste in the "have not" states will be hard pressed to store or dispose of their wastes until their own sites are operative.

Looking at the compacts as a whole, I believe that I have touched upon a number of the concerns that we have with the compacts in their present form. However, there are a few other comments which I will not discuss here this morning. They are attached to my prepared statement. (Exhibit D)

Dual Regulation

And now, if I may, I would like to address another important issue which was raised in Senator Thurmond's letter of December 7, 1983 inviting us to testify here this morning; namely, the specter of dual regulation of low-level radioactive wastes sites by the NRC (10 CFR 61) and the EPA (40 CFR 264) -- a problem which if not addressed and solved may well impinge on the ability of the compact regions and California and Texas to establish their own sites.

In the process of reviewing the nuclear waste compacts, the committee should be aware of the conflicting regulations now facing the existing low-level radioactive waste disposal sites and which will have and immediate impact on those regions that are in the process of developing their own sites. As you may know, the commercial low-level

radioactive waste sites dispose of source, by-product and small quantities of special nuclear material pursuant to the provisions of the Atomic Energy Act of 1954, as amended. Naturally occurring radioactive materials such as uranium, thorium, radium and tritium are regulated by the several states. The EPA under RCRA also has the responsibility for regulating hazardous waste. All the commercial low-level radioactive waste sites are engaged in the disposal of wastes regulated by the Atomic Energy Act of 1954, as amended, and NARM wastes (naturally occurring, accelerator produced radioactive materials), some which may contain small quantities of hazardous waste. As an example, scintillation vials containing small amounts of toluene are used by the medical profession as part of their diagnostic programs. While both agencies have responsibility for this type of waste there is no need for dual regulation of low-level radioactive waste disposal sites, particularly since the primary hazard of the waste is radioactivity and the NRC regulations (10 CRF 61) and the EPA regulations (40 CFR 264) have the same goal in mind, that is the protection of the public health and safety. This being the case, it is my understanding that for the past year or more the two agencies have been in the process of developing a Memorandum of Understanding which would eliminate the possibility of dual regulation.

This matter was first brought to the attention of EPA by US Ecology in 1980, over three years ago, and is still to be resolved. Unfortunately, while it is our hope that a resolution will be forthcoming shortly, if it is not, the whole process of developing interstate nuclear compacts may be dealt a serious blow, not only for the existing sites but particularly for those sites which cannot be planned without knowing which set of rules are to be followed. I have attached to my prepared testimony an analysis of the two regulations that illustrate the differences between the two agencies in their attempt to reach the same goal. (Exhibit "E") While one cannot say that the compacts should be held up until a decision is reached in this area, it would go a long way in expediting the efforts in those States that are planning new

facilities if this issue is resolved before action is taken on the compacts before the committee.

In Senator Thurmond's letter of December 7 he also asked that we comment on EPA's proposal to develop environmental radiation protection standards for low-level radioactive waste disposal (10 CFR 193). In brief, our view on this matter is as follows.

In August of 1983 the EPA Office of Radiation Programs announced its intention to develop radiation protection standards and/or guides for low-level radioactive waste disposal for the purpose of protecting the public health and the general environment from potential adverse effects from this activity (40 CFR 193). The EPA originally requested comments thereon by November 29, 1983; however, this deadline has been extended to January 15, 1984.

On January 6, 1984 we received a copy of an interpretative letter dated December 9, 1983 from James A. Cannon, Assistant Administrator for Air and Radiation, USEPA to Capt. William H. Briner, Secretary-Treasurer, Southeast Interestate Low-Level Radioctive Waste Management Commission, copy attached as Exhibit "F". In that letter, Mr. Cannon advises that the EPA has the authority to issue generally applicable environmental radiation protection standards for the disposal of low-level radioactive waste under the Atomic Energy Act of 1954, as amended, and Reorganization Plan No. 3 of 1970. However, EPA makes the statement that in respect to low-level radioactive waste standards developed under the referenced authority it would concentrate its efforts in establishing numerical limits "on radioactive exposures or levels, or concentrations or quantities of radioactive material in the general environment outside the boundaries of locations used for low-level waste disposal."

And now the problem as we see it -- NRC Regulation, 10 CFR 20, "Standards for Protection Against Radiation" and Appendix B Part 20

entitled "Concentrations in Air and Water Above Natural Background" make every reasonable effort to maintain radiation exposures and releases of radioactive effuents to unrestricted areas as low as reasonably achievable (ALARA).

Based on our review of the NRC's comprehensive regulations governing the disposal of low-level radioactive waste (10 CFR 61), we believe that there is no need for the EPA to devote its time to what would appear to be a duplication of NRC's efforts in this area.

On October 25, 1978 -- some five years ago -- the NRC published an Advance Notice of preposed Rule Making for the development of specific standards for the disposal of low-level radioactive wastes. This action was taken in response to needs and requests expressed by the public, the Congress, industry, the States, the NRC and other Federal agencies. Following the receipt of public comments, including comments from eight federal agencies, and four NRC sponsored regional workships as well as the receipt of comments on the accompanying draft Environmental Impact Statement (EIS) a final rule (10 CFR 61) was adopted and became effective on January 26, 1983. Now EPA is planning to plow the same ground.

In the first instance if it took the NRC five years to develop Part 61 with all the attendant public comments and hearings, one could expect that it could take a similar period of time before any EPA proposal could be finalized. Thus, those interested in developing new sites would either have to wait or gamble that the EPA regulations would be comparable to those of the NRC. If they were not the public would suffer, not to mention the cost to the taxpayers.

In short, the NRC through 10 CFR 61 has already established performance objectives, technical requirements for siting, design, operations and closure activities for near-surface disposal sites, technical requirements for the waste form that waste generators must

meet for the land disposal of waste, classification of waste, institutional requirements and administrative and procedural requirements for licensing and auditing a disposal site. This having been done, there is no need for EPA to take on the same task.

A suggestion has been made that if EPA believes it must act in the area of radiation protection standards for low-level radioactive waste disposal it could best carry out its mission by reviewing the NRC standards used in developing 10 CFR 61 and either address the inadequacies of that standard or endorse it. Certainly this could be conceived as being in the public interest.

CONCLUSION

In conclusion, it is my hope that before this committee recommends and Congress approves any regional compact that the issues which I have brought to your attention this morning will be resolved. I believe that their resolution is a critical step in the process of assuring that all of the Nation's low-level radioactive waste continues to be disposed in a safe, efficient and environmentally sound manner.

Should you have any questions, I will be pleased to respond.

Thank you very much.

REGIONAL LOW-LEVEL WASTE COMPACTS - Status 12/1/83 EXHIBIT "A" (1)

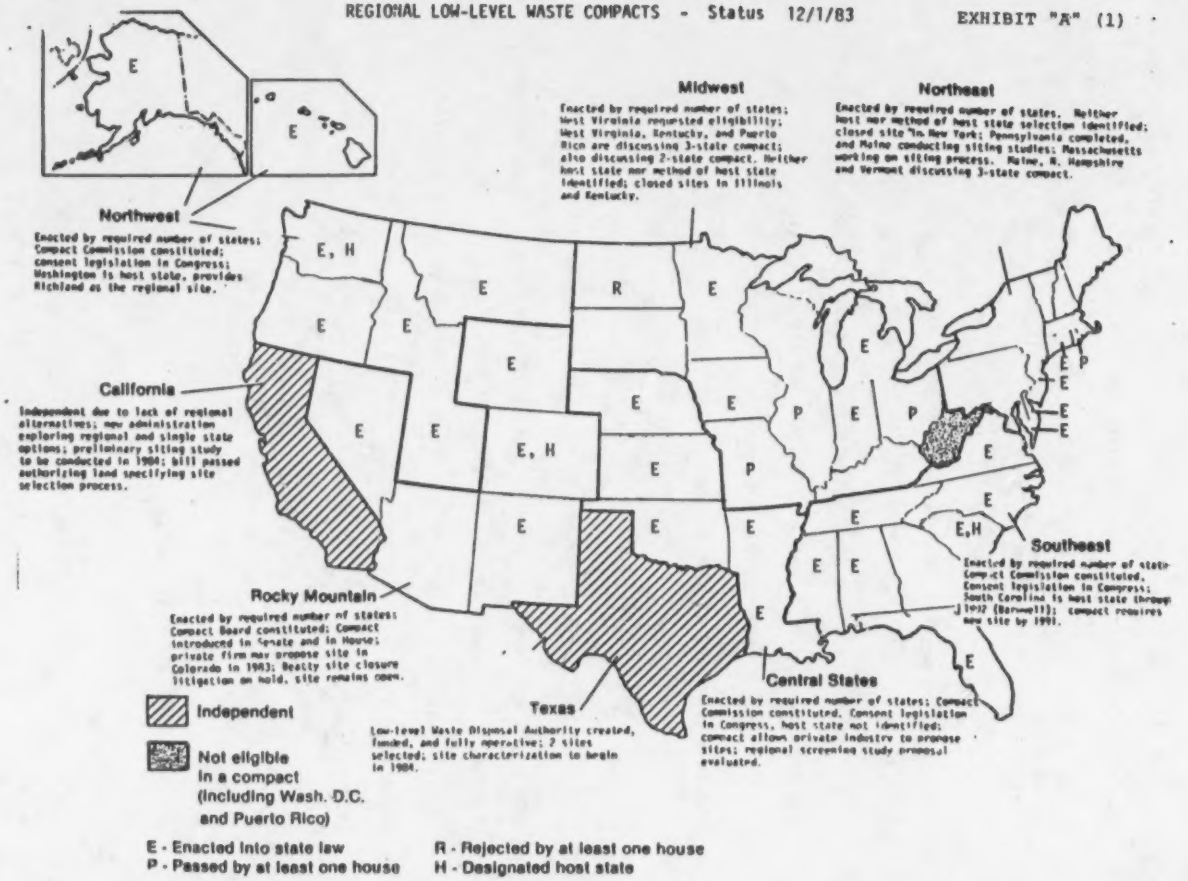
Midwest
Enacted by required number of states; West Virginia requested eligibility; West Virginia, Kentucky, and Puerto Rico are discussing 3-state compact; also discussing 2-state compact. Neither host state nor method of host state identified; closed sites in Illinois and Kentucky.
Northeast
Enacted by required number of states. Neither host nor method of host state selection identified; closed site in New York; Pennsylvania completed, and Maine conducting siting studies; Massachusetts working on siting process. Maine, N. Hampshire and Vermont discussing 3-state compact.
Northwest
Enacted by required number of states; Compact Commission constituted; consent legislation in Congress; Washington is host state, provides Richland as the regional site.
California
Independent due to lack of regional alternatives; new administration exploring regional and single state options; preliminary siting study to be conducted in 1984; bill passed authorizing land specifying site selection process.
Rocky Mountain
Enacted by required number of states; Compact Board constituted; Compact introduced in Senate and in House; private firm may propose site in Colorado in 1983; Beatty site closure litigation on hold, site remains open.
Texas
Low-level Waste Disposal Authority created, funded, and fully operative; 2 sites selected; site characterization to begin in 1984.
Central States
Enacted by required number of states; Compact Commission constituted. Consent legislation in Congress, host state not identified; compact allows private industry to propose sites; regional screening study proposal evaluated.
Southeast
Enacted by required number of states; Compact Commission constituted. Consent legislation in Congress; South Carolina is host state (through 1992 (Barnwell)); compact requires new site by 1991.
Independent
Not eligible in a compact (including Wash. D.C. and Puerto Rico)
E - Enacted into state law
P - Passed by at least one house
R - Rejected by at least one house
H - Designated host state

EXHIBIT "A" (2)

REGION	COMPACT ENACTED BY MINIMUM # OF STATES	CONGRESSIONAL CONSENT	REGIONAL COMMISSION CONSTITUTED	HOST STATE SELECTION PROCESS DEFINED	HOST STATE IDENTIFIED	SITING CRITERIA AND PROCESS DEVELOPED	SCREENING CONCLUDED AND AREAS OF INTEREST IDENTIFIED	CANDIDATE SITES SELECTED	PRIMARY SITE CHARACTERIZATION COMPLETED
CALIFORNIA	N/A	UNCERTAIN	NEGOTIATOR APPOINTED	N/A	YES, CALIFORNIA	UNDERWAY	NO ASSEMBLY BILL 284/342	NO	NO
					N/A	84	2084	4084	4085
CENTRAL STATES	YES	SUBMITTED TO BOTH HOUSES	YES	PARTIALLY DEFINED IN COMPACT	NO	NO	NO, SCREENING PROPOSAL STUDY BEING EVALUATED.	NO	NO
	1083 1083	4083 2083	2083 2083		2085	1084	4084	4085	4086
MIDWEST	YES	NOT SUBMITTED	NO	MINIMALLY DEFINED IN COMPACT	NO	NO	NO	NO	NO
	2083 2083	1084	1084		1086	2086	4086	2087	2088
NORTHEAST	YES	NOT SUBMITTED	NO	MINIMALLY DEFINED IN COMPACT	NO	NO	NO	NO	NO
	1083 2083	2084	3083		1086	3085	4086	2087	2088
NORTHWEST	YES	SUBMITTED TO BOTH HOUSES	YES	YES, COMPACT IDENTIFIES HOST STATE	YES, WA. RICHLAND OPEN	N/A	N/A	N/A	N/A
	2081 2081	1083 1083	1082 1082		2081 2081				
ROCKY MOUNTAIN	YES	SUBMITTED TO BOTH HOUSES	YES,	YES, COMPACT CONTAINS FORMULA	YES BEATTY NV/CO	YES, BY HOST STATE	POSSIBLE BY STATE OR INDUSTRY	NO, NATURITA SITE WITHDRAWN	NO
	1083 1083	4083 4083	3083 4083		1083 1083	2084	4A84	4085	4086
SOUTHEAST	YES	SUBMITTED TO BOTH HOUSES	YES	YES, COMPACT IDENTIFIES HOST STATE	YES, SC, BARNWELL THRU 92 NEXT HOST UNIDENTIFIED	YES, VIRGINIA BUT NOT COMMITTED TO HOSTING SITE	YES, VIRGINIA STUDY (4082)	NO, VIRGINIA SELECTION DELAYED FOR ONE YEAR	
	2083 2083	4083 3083	3083 4083		3086		2087 4082	4087	4088
TEXAS	N/A	UNCERTAIN	STATE DISPOSAL AUTHORITY ESTABLISHED	N/A	YES, TEXAS	YES	YES, 2 SITES IDENTIFIED	NO	NO
			4082 4082		N/A	1083 1083	3083 3083	4083	4084

KEY: STATUS — ESTIMATED DATE / ACTUAL DATE

(DATES ARE CALENDAR YEAR)

EXHIBIT "B" (1)

Definitions of Low-Level Radioactive Waste in Pertinent Legislation

Northwest Compact (S. 247, H.R. 1012)

Article II, "(2) 'Low-level waste' means waste material which contains radioactive nuclides emitting primarily beta or gamma radiation, or both, in concentrations or quantities which exceed applicable federal or state standards for unrestricted release. Low-level waste does not include waste containing more than ten (10) nanocuries of transuranic contaminants per gram of material, nor spent reactor fuel, nor material classified as either high-level waste or waste which is unsuited for disposal by near-surface burial under any applicable federal regulations;

Central Compact (S. 1581, H.R. 3002)

Article II, "g 'low-level radioactive waste' or 'waste' means, as defined in the Low-Level Radioactive Waste Policy Act (Public Law 96-573), radioactive waste not classified as: High-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in section 11 e. (2) of the Atomic Energy Act of 1954, as amended through 1978;

Southeast Compact (S. 1749, H.R. 3777)

Article 2 "(6) 'Low-level radioctive waste' or 'waste' means radioctive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or by-product material as defined in Section 11 e. of the Atomic Energy Act of 1954, or as may be further defined by federal law or regulation.

Rocky Mountain Compact (S.1991)

Article II, (g) "Low-level waste" or "waste" means radioactive waste other than: "waste generated as a result of defense activities of the federal government or federal research and development activities; high-level waste such as irradiated reactor fuel liquid waste from reprocessing irradiated reactor fuel, or solids into which any such liquid waste has been converted; waste material containing transuranic elements with contamination levels greater than ten (10) nanocuries per gram of waste material; by-product material as defined in Section 11 e. (2) of the "Atomic Energy Act of 1954," as amended November 8, 1978; or wastes from mining, milling, smelting or similar processing of ores and mineral-bearing material primarily for mineral other than radium.

EXHIBIT "B" (2)

Definitions of Low-Level Radioactive Waste in Pertinent Legislation

1980 Low-Level Radioactive Waste Policy Act
(Public Law 96-573)

Section 2 (2) The term "low-level radioactive waste" means radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in section 11 e. (2) of the Atomic Energy Act of 1954.

Nuclear Waste Policy Act of 1982
(Public Law 97-425)

Section 2 (16) The term "Low-level radioactive waste" means radioactive material that--
(A) is not high-level radioactive waste, spent nuclear fuel, transuranic waste, or by-product material as defined in section 11 e. (2) of the Atomic Energy Act OF 1954 (42 U.S.C. 2014 (e) (2): and
(B) the Commission, consistent with existing law, classifies as low-level radioactive waste.

U. S. Nuclear Regulatory Commission
Rules and REgulations
10 CFR Part 61.2 - Definitions
"Waste" means those low-level radioactive wastes containing source, special nuclear, or byproduct material that are acceptable for disposal in a land disposal facility. For the purposes of this definition, low-level waste has the same meaning as in the Low-Level Waste Policy Act, that is radioactive waste not classified as high-level radioactive waste, transuranic waste, spent nuclear fuel, or byproduct material as defined in Section 11 e. (2) of the Atomiac Energy Act (Uranium or thorium tailings and waste).

Exhibit "C" (1)

LOW-LEVEL RADIOACTIVE WASTE SHIPMENT CERTIFICATION FOR COMMERCIAL GENERATOR/PACKAGERS, AND BROKERS AND CARRIERS

The following certification, completed as applicable, is made to the State of Washington:

Certification is hereby made to the State of Washington that Radiation Shipment Record No. _____ of low-level radioactive waste has been inspected in accordance with requirements of the Governor of Washington's Executive Order dated November 19, 1979, prior to its shipment. Further certification is made that the inspection has revealed no items of non-compliance with all applicable laws, rules and regulations.

The undersigned shall indemnify and hold harmless the State of Washington, in an amount not to exceed $1,000,000.00 per individual who may be injured, provided that indemnification shall not exceed $5,000,000.00 in total, for each occurrence, from any and all claims, suits, losses, damage, injury and expenses to any person whomsoever or to property arising or growing out of or in any manner connected with the activities performed under this order.

Except for any violation of applicable existing state or federal statute or regulation respecting packaging and shipment, inspection and acceptance of any item, or container or material covered by this certification by the State of Washington or a duly authorized contractor shall release the party who executed this certificate from any and all requirement of indemnification from injury or loss.

SECTION A:
FOR THE GENERATOR/PACKAGER: _____
(Company Name)

PERMIT NUMBER: _____

VOLUME OF WASTE IN THIS SHIPMENT: _____

DATE: _____ BY: _____

TITLE: _____

SECTION B:
FOR THE BROKER: _____
(Company Name)

PERMIT NUMBER: _____

VOLUME OF WASTE IN THIS SHIPMENT: _____

DATE: _____ BY: _____

TITLE: _____

SECTION C:
FOR THE CARRIER: _____
(Company Name)

VOLUME OF WASTE IN THIS SHIPMENT: _____

DATE: _____ BY: _____

TITLE: _____

DSHS [illegible]

DSHS [illegible]

Exhibit "C" (2)

LOW-LEVEL RADIOACTIVE WASTE SHIPMENT CERTIFICATION FOR GOVERNMENTAL GENERATOR/PACKAGERS, AND BROKERS AND CARRIERS

The following certification, completed as applicable, is made to the State of Washington:

Certification is hereby made to the State of Washington that Radiation Shipment Record No. _____ of low-level radio-active waste has been inspected in accordance with requirements of the Governor of Washington's Executive Order dated November 19, 1979, prior to its shipment. Further certification is made that the inspection has revealed no items of non-compliance with all applicable laws, rules and regulations.

The undersigned agency of a state or the federal government shall indemnify and hold harmless the State of Washington from any and all claims, suits, losses, charges and expenses on account of injuries to any and all persons whomsoever, and any and all property damage arising or growing out of or in any manner connected with the activities performed under this order; provided that: (1) in the event that a state or the federal government has to pay for any loss under the previous clause, such indemnification shall not exceed $1,000,000.00 per individual who may be injured, provided total indemnification shall not exceed $5,000,000.00 or indemnification shall not exceed monies available from appropriated funds of the government at the time of the injury or loss, whichever is greater; provided further, that nothing in this certification will be considered as implying that the legislative body will, at a date later than the injury or loss, appropriate sufficient funds to meet any deficiency of funds at the time of injury or loss.

Except for any violation of applicable existing state or federal statute or regulation respecting packaging and shipment, inspection and acceptance of any item or container or material covered by this certificate by the State of Washington or a duly authorized contractor shall release the party who executed this certificate from any and all requirement of indemnification from injury or loss.

SECTION A:
FOR THE GENERATOR/PACKAGER: _____
(Company Name)

PERMIT NUMBER: _____

VOLUME OF WASTE IN THIS SHIPMENT: _____

DATE: _____ BY: _____

TITLE: _____

Certification is hereby made to the State of Washington that Radiation Shipment Record No. _____ of low-level radio-active waste has been inspected in accordance with requirements of the Governor of Washington's Executive Order dated November 19, 1979, prior to its shipment. Further certification is made that the inspection have revealed no items of non-compliance with all applicable laws, rules and regulations.

The undersigned shall indemnify and hold harmless the State of Washington, in an amount not to exceed $1,000,000.00 per individual who may be injured, provided that indemnification shall not exceed $5,000,000.00 in total, for each occurrence, from any and all claims, suits, losses, damage, injury and expenses to any person whomsoever or to property arising or growing out of or in any manner connected with the activities performed under this order.

Except for any violation of applicable existing state or federal statute or regulation respecting packaging and shipment, inspection and acceptance of any item, or container or material covered by this certification by the State of Washington or a duty authorized contractor shall release the party who executed this certificate from any and all requirement of indemnification from injury or loss.

SECTION B:
FOR THE BROKER: _____
(Company Name)

PERMIT NUMBER _____

VOLUME OF WASTE IN THIS SHIPMENT _____

DATE: _____ BY: _____

TITLE: _____

SECTION C:
FOR THE CARRIER: _____
(Company Name)

VOLUME OF WASTE IN THIS SHIPMENT _____

DATE: _____ BY: _____

TITLE: _____

Exhibit "C" (3)

LOW-LEVEL RADIOACTIVE WASTE SHIPMENT CERTIFICATION FOR THE FEDERAL GOVERNMENT AS A GENERATOR/PACKAGER, AND ITS BROKERS AND CARRIERS

The following certification, completed as applicable, is made to the State of Washington:

Certification is hereby made to the State of Washington that Radiation Shipment Record No. _____ of low-level radioactive waste has been inspected in accordance with requirements of the Governor of Washington's Executive Order dated November 19, 1979, prior to its shipment. Further certification is made that the inspection has revealed no items of non-compliance with all applicable laws, rules and regulations.

As determined under the provisions of the Federal Tort Claims Act (28 USC § 2671-2680), the undersigned shall be liable for and hold harmless the State of Washington from any and all claims, suits, losses, damages or expenses on account of injuries to any and all persons whomsoever, and any and all property damage, arising or growing out of or in any manner connected with any activities performed under this order.

Except for any violation of applicable existing state or federal statute or regulation respecting packaging and shipment, inspection and acceptance of any item or container or material covered by this certification by the State of Washington or a duly authorized contractor shall release the party who executed this certificate from any and all requirement of indemnification from injury or loss.

SECTION A:
FOR THE GENERATOR/PACKAGER: _____
(Company Name)

PERMIT NUMBER: _____

VOLUME OF WASTE IN THIS SHIPMENT: _____

DATE: _____ BY: _____

TITLE: _____

Certification is hereby made to the State of Washington that Radiation Shipment Record No. _____ of low-level radioactive waste has been inspected in accordance with requirements of the Governor of Washington's Executive Order dated November 19, 1979, prior to its shipment. Further certification is made that the inspection have revealed no items of non-compliance with all applicable laws, rules and regulations.

The undersigned shall indemnify and hold harmless the State of Washington, in an amount not to exceed $1,000,000.00 per individual who may be injured, provided that indemnification shall not exceed $5,000,000.00 in total, for each occurrence, from any and all claims, suits, losses, damage, injury and expenses to any person whomsoever or to property arising or growing out of or in any manner connected with the activities performed under this order.

Except for any violation of applicable existing state or federal statute or regulation respecting packaging and shipment, inspection and acceptance of any item, or container or material covered by this certification by the State of Washington or a duty authorized contractor shall release the party who executed this certificate from any and all requirement of indemnification from injury or loss.

SECTION B:
FOR THE BROKER: _____
(Company Name)

PERMIT NUMBER: _____

VOLUME OF WASTE IN THIS SHIPMENT: _____

DATE: _____ BY: _____

TITLE: _____

SECTION C:
FOR THE CARRIER: _____
(Company Name)

VOLUME OF WASTE IN THIS SHIPMENT: _____

DATE _____ BY: _____

TITLE: _____

DSHS 6nd-21-C
DSHS 13-424

Exhibit "D" (1)

OTHER ISSUES FOR THE COMMITTEE'S CONSIDERATION

Limit on Access

The Southeast Compact provides that a host state may terminate or limit access to its regional facility if it determines that Congress has materially altered the conditions of the Compact [Art. 5 (B)]. In short, the Commission would have the authority to override Congress after Congress has considered the Southeast Compact. By such action the consent process would clearly be nullified. We believe that this was not the intent of Congress when the Low-Level Radioactive Waste Policy Act was enacted into law and recommend that this section be deleted from the terms of the Compact.

NRC Licensees

The Northwest Compact provides for the periodic unannounced inspection of the premises of NRC licensees and the waste management activities thereon. Currently such licensees are subject only to federal inspection with respect to activities carried out under NRC licenses and federal regulations. This provision should be deleted from the Northwest Compact. In lieu thereof, an accommodation could be made for an inspection program through a Memorandum of Understanding between the federal and state agencies.

Inappropriate Authority Over NRC

Article V.e.2. of the Central States Compact requires a state or states, or the NRC, to process all applications for permits and licenses for the development and operation of any regional facility or facilities within a reasonable period from the time a complete application is submitted. To place the Compact Commission in a position where it can dictate to a federal agency would appear to be somewhat unique in the federal/state system as well as inappropriate. While we understand that this provision is by way of exhortation only, its appearance in a legal document approved by the Congress may be inappropriate.

Restrictions on Transport

Article III g.4. of the Central States Compact provides that it will be unlawful after January 1, 1986 for any person to transport waste from the site at which it is generated except to a regional facility. Does this mean that a generator who has a warehouse two blocks from his facility cannot send his waste to that warehouse for temporary storage? Does this provision also mean that a broker would be prohibited from picking up waste and temporarily storing it at an assembly point before transporting it to the regional facility? This provision, in our view, needs clarification.

Limiting Waste

Nothing in the language of any of the compacts should be interpreted as permitting the imposition of any limitation on the acceptance of low-level radioactive waste based upon the types of activities which generated the waste. This should be made clear as long as the waste complies with all presently applicable regulatory requirements.

For example, a host state which is also a non-reactor state could decide to restrict burial to non-reactor waste or impose some other similar restriction apparently without discussion with the other party states. This type of authority is contained with the Northwest Compact [Art. IV (5)] and should be deleted.

Exhibit "E" (1)

NRC-EPA Regulation of
Low-Level Radioactive Waste Sites

The commercial low-level radioactive waste sites dispose of source, by-product and small quantities of special nuclear material under the aegis of the Atomic Energy Act of 1954, as amended. Naturally occurring radioactive materials,* accelerator produced isotopes and hazardous waste are regulated by the several states and EPA under RCRA. All of the commercial sites are engaged in the disposal of low-level atomic energy waste and NARM wastes, with minute quantities of hazardous waste comingled with the rad waste, e.g. organic solvents - scintillation vials.

Inasmuch as Part 61 of the NRC Regulations and 40 CFR 264 of the EPA Regulations have the same goal in mind, that is the protection of the public health and safety. There appears to be no need for dual regulation of these sites to achieve this objective. Differences in approach to the goal of health and safety are few, but of concern, should dual regulation be required. They are set out herein:

EPA/NRC DISPOSAL
Requirements

EPA Hazardous Waste Disposal Permit Requirements 40 CFR 264	NRC Low Level Radioactive Waste Licensing Requirements 10 CFR 61
o Requires detail chemical and physical analysis of representative sample prior to treatment or disposal. Liability on operator (264.136(a)(1)	o Generator/packagers assure that classificat characteristic, and stability satisfy 61.55 and 61.56 (20.311).
o Analysis above will require chemical laboratory handling of sample.	o 61.55 and 61.56 provide classification and characteristics which assure suitability for land disposal. No accomodations made for treatment.
o Because of liability on disposer each movement of waste must be inspected and if necessary sampled and analyzed to assure identity matching manifest (264.13(a)(4) (drums must be opened).	o 61.56 (a)(8) requires treatment of hazardous component to minimize to extent practicable the hazard from non radioacti material. o Liability, assurances and QC program of generator eliminates need for disposer to open and inspect containers nor for chem lab to handle. In keeping with ALARA o Manifest must contain chemical form, solidfication agent, chealating agent,etc (20.311)

*e.g. uranium
thorium
radium
tritium

Exhibit "E" (2)

EPA Hazardous Waste Disposal Permit Requirements 40 CFR 264	NRC Low Level Radioactive Waste Licensing Requirements 10 CFR 61
o Requires inspection and if necessary analyses of incoming wastes and reporting of manifest discrepancies in type or quantity (264.72)	o ALAR discourages opening of containers. Identification liability is on generator manifest discrepancies in type and are not detectable at disposal facility.
o Requires operating record containing waste analyses and inspection results 264.73.	o Analysis and inspection of waste movement discouraged due to ALARA.
o Requires detection and compliance monitoring of chemicals. Also, corrective action as part of permit. Monitoring parameters are of chemical nature and comprise the groundwater protection standard and hazardous constituent and concentration limits list 264 Subpart F.	o Requirements for groundwater monitoring address only radionuclides. (61.53)
o Requires operation and closure that will minimize ongoing maintenance (264.111) + 264.301).	o Requires operation and closure to achieve stability necessary to eliminate the need for ongoing maintenance to the maximum extent possible (61.13, 61.44, 61.52)
o Requires 30 years post closure (264.117)	o Requires 5 year post closure care and 100 year institutional control (61.70).
o Maintenance after post closure care accomodated by post closure liability tax on RCRA hazardous wastes.	o Funding for institutional care (100 years) provided via PC&M fund which is collected from disposer based on waste receipt.
O Requires synthetic liners (264.301)	o Combines site locational characteristic waste stability and necessary construct barriers to minimize contaminant migration to groundwater (61.50, 51.51)
o Require leachate collection and removal systems. (264.301)	o Discourages leachate collection and removal systems due to long term maintenance (p. 547450 of FR 47) rely instead on locational characterist and stability.
o Require removal, treatment, and disposal of contaminated leachate. (264.301)	o ALARA is violated if contaminated leachate is handled, increasing exposure. Reliance is instead on prevention of the need.
o No requirement	o RCRA hazardous waste must be treated to reduce to maximum extent practicable the potential hazard from non radiological materials (61.566)(8).

STATEMENT OF HARRY LAWROSKI, ENERGY CONSULTANT, IDAHO

Mr. LAWROSKI. May I use the microphone?

Senator SIMPSON. Yes, please. If you would just give your name for the reporter, please, Harry, I remember meeting you in Jackson, Wyo., some time ago.

Mr. LAWROSKI. Thank you, Senator. My name is Harry Lawroski. I am a consultant in the energy business. I live in Idaho, but I do consulting for a lot of utilities, a lot of cost utilities for the Governor of California, and in many cases utilities for a lot of individuals.

I am very much interested in this whole subject of low-level waste disposal. It is probably one of the most important things that I think Congress and the Governors have embarked upon in the last several years.

I would like to really address my remarks to what I have found to be very important issues which should be solved within the time period included in the Public Law 96–573. The overwhelming concern at the present time is that the compacts that are submitted to Congress should be approved by Congress.

The compacts as submitted really should be approved by Congress, and in the consent language and in the legislative history, iron out the problems of each of the compacts. Because each of the compacts indeed do have problems.

The single most important issue, however, I believe, is the ability to accommodate after the 1986 date, or when the compacts are ratified. That, by far, is the real issue on it. It has not only public health impacts, but it also has economic impacts.

I think all of the States who are involved in compacts right now are working toward that. I share with Mr. Scoville the concern of knowing exactly what those agreements are, but I am not so sure we can get all those agreements in place by the time the compacts really should be ratified. I think that particular one is by far the most important issue.

I would urge Congress to take the lead in making sure that the compacts are indeed ratified with the proper legislative history, consent language, or whatever. I am not a politician, I really don't understand how these things are rally done, except that that should be done. I think that basically sets my goal.

I think you will find that not all States will be members of compacts. I don't think that should deter Congress from ratifying the compacts. Because that is the incentive for the States to become members of compacts. And I think that is a very important issue; it's one that I don't think you will ever solve. The States like to behave by themselves.

I also agree with Mr. Scoville's comment that to have each compact have its own disposal site is probably going to be counterproductive from an economic standard. Because when you divide those all up, the economics start showing up, the same goes for volume reduction, and the economics of onsite or interim storage are really depressing when you start taking a look at what the costs of having to store and not being able to dispose.

Thank you very much for that.

Senator SIMPSON. That is very helpful.

Mr. LAWROSKI. I will answer any questions, if you would like.

Senator SIMPSON. That is very helpful. I appreciate that. That will be a good part of the record. I don't have any questions. Anyone else care to make any statement or submit something in writing?

I believe that concludes the hearing, I want to thank each and every one of you. You have been very patient, and you have been very helpful, and Glen, you have been more than patient.

Mr. SJOBLOM. I always am.

Senator SIMPSON. I know you are. How do you do that? Do you go home and beat up—oh, no. No.

Mr. SJOBLOM. No, I pray a lot.

Senator SIMPSON. Pray a lot. Well, you are a very effective guy, and you know that it's a vexing thing for us, and do share it with your peers and as I have shared it with Bill, and I will again thank you so much, and I appreciate your attendance, and this concludes the hearing.

[Whereupon, at 12:16 p.m., the committee was adjourned.]

APPENDIX

98TH CONGRESS
1ST SESSION

S. 1991

To grant the consent of the Congress to the Rocky Mountain Low-Level Radioactive Waste Compact.

IN THE SENATE OF THE UNITED STATES

OCTOBER 21 (legislative day, OCTOBER 17), 1983

Mr. SIMPSON (for himself, Mr. BINGAMAN, Mr. DOMENICI, Mr. GARN, Mr. HART, Mr. HATCH, Mr. HECHT, Mr. LAXALT, and Mr. WALLOP) introduced the following bill; which was read twice and referred to the Committee on the Judiciary

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A BILL

To grant the consent of the Congress to the Rocky Mountain Low-Level Radioactive Waste Compact.

Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That, in accordance with section 4(a)(2) of the Low-Level Radioactive Waste Policy Act (42 U.S.C. 2021d(a)(2)), the consent of the Congress hereby is given to the States of Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming to enter into the Rocky Mountain Interstate Low-Level Radioactive Waste Compact.

Such compact is substantially as follows:

ROCKY MOUNTAIN LOW-LEVEL RADIOACTIVE WASTE COMPACT

ARTICLE I. FINDINGS AND PURPOSE

(a) The party states agree that each state is responsible for providing for the management of low-level radioactive waste generated within its borders, except for waste generated as a result of defense activities of the federal government or federal research and development activities. Moreover, the party states find that the United States Congress, by enacting the "Low-Level Radioactive Waste Policy Act" (P. L. 96–573), has encouraged the use of interstate compacts to provide for the establishment and operation of facilities for regional management of low-level radioactive waste.

(b) It is the purpose of the party states, by entering into an interstate compact, to establish the means for cooperative effort in managing low-level radioactive waste; to ensure the availability and economic viability of sufficient facilities for the proper and efficient management of low-level radioactive waste generated within the region while preventing unnecessary and uneconomic proliferation of such facilities; to encourage reduction of the volume of low-level radioactive waste requiring disposal within the region; to restrict management within the region of low-level radioactive waste generated outside the region; to distribute the costs, benefits and obligations of low-level radioactive waste management

equitably among the party states; and by these means to promote the health, safety and welfare of the residents within the region.

ARTICLE II. DEFINITIONS

As used in this compact, unless the context clearly indicates otherwise:

(a) "Board" means the Rocky Mountain low-level radioactive waste board;

(b) "Carrier" means a person who transports low-level waste;

(c) "Disposal" means the isolation of waste from the biosphere, with no intention of retrieval, such as by land burial;

(d) "Facility" means any property, equipment or structure used or to be used for the management of low-level waste;

(e) "Generate" means to produce low-level waste;

(f) "Host state" means a party state in which a regional facility is located or being developed;

(g) "Low-level waste" or "waste" means radioactive waste other than:

(i) Waste generated as a result of defense activities of the federal government or federal research and development activities;

(ii) High-level waste such as irradiated reactor fuel, liquid waste from reprocessing irradiated reactor fuel, or solids into which any such liquid waste has been converted;

(iii) Waste material containing transuranic elements with contamination levels greater than ten (10) nanocuries per gram of waste material;

(iv) By-product material as defined in Section 11e.(2) of the "Atomic Energy Act of 1954," as amended November 8, 1978; or

(v) Wastes from mining, milling, smelting or similar processing of ores and mineral-bearing material primarily for minerals other than radium.

(h) "Management" means collection, consolidation, storage, treatment, incineration or disposal;

(j) "Operator" means a person who operates a regional facility;

(k) "Person" means an individual, corporation, partnership or other legal entity, whether public or private;

(m) "Region" means the combined geographic area within the boundaries of the party states; and

(n) "Regional facility" means a facility within any party state which either:

(i) has been approved as a regional facility by the board; or

(ii) is the low-level waste facility in existence on January 1, 1982, at Beatty, Nevada.

ARTICLE III

RIGHTS, RESPONSIBILITIES, AND OBLIGATIONS

(a) There shall be regional facilities sufficient to manage the low-level waste generated within the region. At least one (1) regional facility shall be open and operating in a party state other than Nevada within six (6) years after this compact becomes law in Nevada and in one (1) other state.

(b) Low-level waste generated within the region shall be managed at regional facilities without discrimination among the party states; provided, however, that a host state may close a regional facility when necessary for public health or safety.

(c) Each party state which, according to reasonable projections made by the board, is expected to generate twenty percent (20%) or more in cubic feet except as othewise determined by the board of the low-level waste generated within the region has an obligation to become a host state in compliance with subsection (d) of this article.

(d) A host state, or a party state seeking to fulfill its obligation to become a host state, shall:

(i) Cause a regional facility to be developed on a timely basis as determined by the board, and secure the approval of such regional facility by the board as provided in Article IV before allowing site preparation or physical construction to begin;

(ii) Ensure by its own law, consistent with any applicable federal law, the protection and preservation of public health and safety in the siting, design, development, licensure or other regulation, operation, closure, decommissioning and long-term care of the regional facilities within the state;

(iii) Subject to the approval of the board, ensure that charges for management of low-level waste at the regional facilities within the state are reasonable;

(iv) Solicit comments from each other party state and the board regarding siting, design, development, licensure or other regulation, operation, closure, decommissioning and long-term care of the regional facilities within the state and respond in writing to such comments;

(v) Submit an annual report to the board which contains projections of the anticipated future capacity and availability of the regional facilities within the state, together with other information required by the board; and

(vi) Notify the board immediately if any exigency arises requiring the possible temporary or permanent closure of a regional facility within the state at a time earlier than was projected in the state's most recent annual report to the board.

(e) Once a party state has served as a host state, it shall not be obligated to serve again until each other party state having an obligation under subsection (c) of this article has fulfilled that obligation. Nevada, already being a host state, shall not be obligated to serve again as a host state until every other party state has so served.

(f) Each party state:

(i) Agrees to adopt and enforce procedures requiring low-level waste shipments originating within its borders and destined for a regional facility to conform to packaging and transportation requirements and regulations. Such procedures shall include but are not limited to:

(A) Periodic inspection of packaging and shipping practices;

(B) Periodic inspections of waste containers while in the custody of carriers; and

(C) Appropriate enforcement actions with respect to violations.

(ii) Agrees that after receiving notification from a host state that a person in the party state has violated packaging, shipping or transportation requirements or regulations, it shall take appropriate action to ensure that violations do not recur. Appropriate action may include but is not limited to the requirement that a bond be posted by the violator to pay the cost of re-packaging at the regional facility and the requirement that future shipments be inspected;

(iii) May impose fees to recover the cost of the practices provided for in paragraph (i) and (ii) of this subsection;

(iv) Shall maintain an inventory of all generators within the state that may have low-level waste to be managed at a regional facility; and

(v) May impose requirements or regulations more stringent than those required by this subsection.

ARTICLE IV. BOARD APPROVAL OF REGIONAL FACILITIES

(a) Within ninety (90) days after being requested to do so by a party state, the board shall approve or disapprove a regional facility to be located within that state.

(b) A regional facility shall be approved by the board if and only if the board determines that:

(i) There will be, for the foreseeable future, sufficient demand to render operation of the proposed facility economically feasible without endangering the economic feasibility of operation of any other regional facility; and

(ii) The facility will have sufficient capacity to serve the needs of the region for a reasonable period of years.

ARTICLE V. SURCHARGES

(a) The board shall impose a "compact surcharge" per unit of waste received at any regional facility. The surcharge shall be adequate to pay the costs and expenses of the board in the conduct of its authorized activities and may be increased or decreased as the board deems necessary.

(b) A host state may impose a "state surcharge" per unit of waste received at any regional facility within the state. The host state may fix and change the amount of the state surcharge subject to approval by the board. Money received from the state surcharge may be used by the host state for any purpose authorized by its own law, including but not limited to costs of licensure and regulatory activities related to the regional facility, reserves for decommissioning and long-term care of the regional facility and local impact assistance.

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ARTICLE VI. THE BOARD

(a) The "Rocky Mountain low-level radioactive waste board", which shall not be an agency or instrumentality of any party state, is created.

(b) The board shall consist of one (1) member from each party state. The governor shall determine how and for what term its member shall be appointed, and how and for what term any alternate may be appointed to perform that member's duties on the board in the member's absence.

(c) Each party state is entitled to one (1) vote. A majority of the board constitutes a quorum. Unless otherwise provided in this compact, a majority of the total number of votes on the board is necessary for the board to take any action.

(d) The board shall meet at least once a year and otherwise as its business requires. Meetings of the board may be held in any place within the region deemed by the board to be reasonably convenient for the attendance of persons required or entitled to attend and where adequate accommodations may be found. Reasonable public notice and opportunity for comment shall be given with respect to any meeting; provided, however, that nothing in this subsection shall preclude the board from meeting in executive session when seeking legal advice from its attorneys or when discussing the employment, discipline or termination of any of its employees.

(e) The board shall pay necessary travel and reasonable per diem expenses of its members, alternates, and advisory committee members.

(f) The board shall organize itself for the efficient conduct of its business. It shall adopt and publish rules consistent with this compact regarding its organization and procedures. In special circumstances the board, with unanimous consent of its members, may take actions by telephone; provided, however, that any action taken by telephone shall be confirmed in writing by each member within thirty (30) days. Any action taken by telephone shall be noted in the minutes of the board.

(g) The board may use for its purposes the services of any personnel or other resources which may be offered by any party state.

(h) The board may establish its offices in space provided for that purpose by any of the party states, or, if space is not provided or is deemed inadequate, in any space within the region selected by the board.

(j) Consistent with available funds, the board may contract for necessary personnel services to carry out its duties. Staff shall be employed without regard for the personnel, civil service, or merit system laws of any of the party states and shall serve at the pleasure of the board. The board may provide appropriate employee benefit programs for its staff.

(k) The board shall establish a fiscal year which conforms to the extent practicable to the fiscal years of the party states.

(m) The board shall keep an accurate account of all receipts and disbursements. An annual audit of the books of the board shall be conducted by an independent certified public accountant, and the audit report shall be made a part of the annual report of the board.

(n) The board shall prepare and include in the annual report a budget showing anticipated receipts and disbursements for the ensuing year.

(o) Upon legislative enactment of this compact, each party State shall consider the need to appropriate seventy thousand dollars ($70,000.00) to the board to support its activities prior to the collection of sufficient funds through the compact surcharge imposed pursuant to subsection (a) of article V of this compact.

(p) The board may accept any donations, grants, equipment, supplies, materials or services, conditional or otherwise, from any source. The nature, amount and condition, if any, attendant upon any donation, grant or other resources accepted pursuant to this subsection, together with the identity of the donor or grantor, shall be detailed in the annual report of the board.

(q) In addition to the powers and duties conferred upon the board pursuant to other provisions of this compact, the board:

(i) Shall submit communications to the governors and to the presiding officers of the legislatures of the party states regarding the activities of the board, including an annual report to be submitted by December 15;

(ii) May assemble and make available to the governments of the party states and to the public through its members information concerning low-level waste management needs, technologies and problems;

(iii) Shall keep a current inventory of all generators within the region, based upon information provided by the party states;

(iv) Shall keep a current inventory of all regional facilities, including information on the size, capacity, location, specific wastes capable of being managed and the projected useful life of each regional facility;

(v) May keep a current inventory of all low-level waste facilities in the region, based upon information provided by the party states;

(vi) Shall ascertain on a continuing basis the needs for regional facilities and capacity to manage each of the various classes of low-level waste;

(vii) May develop a regional low-level waste management plan;

(viii) May establish such advisory committees as it deems necessary for the purpose of advising the board on matters pertaining to the management of low-level waste;

(ix) May contract as it deems appropriate to accomplish its duties and effectuate its powers, subject to its projected available resources; but no contract made by the board shall bind any party state;

(x) Shall make suggestions to appropriate officials of the party states to ensure that adequate emergency response programs are available for dealing with any exigency that might arise with respect to low-level waste transportation or management;

(xi) Shall prepare contingency plans, with the cooperation and approval of the host state, for management of low-level waste in the event any regional facility should be closed;

(xii) May examine all records of operators of regional facilities pertaining to operating costs, profits or the assessment or collection of any charge, fee or surcharge;

(xiii) Shall have the power to sue; and

(xiv) When authorized by unanimous vote of its members, may intervene as of right in any administrative or judicial proceeding involving low-level waste.

ARTICLE VII. PROHIBITED ACTS AND PENALTIES

(a) It shall be unlawful for any person to dispose of low-level waste within the region, except at a regional facility; provided, however, that a generator who, prior to January 1, 1982, had been disposing of only his own waste on his own property may, subject to applicable federal and state law, continue to do so.

(b) After January 1, 1986, it shall be unlawful for any person to export low-level waste which was generated within the region outside the region unless authorized to do so by the board. In determining whether to grant such authorization, the factors to be considered by the board shall include, but not be limited to, the following:

(i) The economic impact of the export of the waste on the regional facilities;

(ii) The economic impact on the generator of refusing to permit the export of the waste; and

(iii) The availability of a regional facility appropriate for the disposal of the waste involved.

(c) After January 1, 1986, it shall be unlawful for any person to manage any low-level waste within the region unless the waste was generated within the region or unless

authorized to do so both by the board and by the state in which said management takes place. In determining whether to grant such authorization, the factors to be considered by the board shall include, but not be limited to, the following:

(i) the impact of importing waste on the available capacity and projected life of the regional facilities;

(ii) the economic impact on the regional facilities; and

(iii) the availability of a regional facility appropriate for the disposal of the type of waste involved.

(d) It shall be unlawful for any person to manage at a regional facility any radioactive waste other than low-level waste as defined in this compact, unless authorized to do so both by the board and the host state. In determining whether to grant such authorization, the factors to be considered by the board shall include, but not be limited to, the following:

(i) the impact of allowing such management on the available capacity and projected life of the regional facilities;

(ii) the availability of a facility appropriate for the disposal of the type of waste involved;

(iii) the existence of transuranic elements in the waste; and

(iv) the economic impact on the regional facilities.

(e) Any person who violates subsection (a) or (b) of this article shall be liable to the board for a civil penalty not to exceed ten (10) times the charges which would have been charged for disposal of the waste at a regional facility.

(f) Any person who violates subsection (c) or (d) of this article shall be liable to the board for a civil penalty not to exceed ten (10) times the charges which were charged for management of the waste at a regional facility.

(g) The civil penalties provided for in subsections (e) and (f) of this article may be enforced and collected in any court of general jurisdiction within the region where necessary jurisdiction is obtained by an appropriate proceeding commenced on behalf of the board by the attorney general of the party state wherein the proceeding is brought or by other counsel authorized by the board. In any such proceeding, the board, if it prevails, is entitled to recover reasonable attorney's fees as part of its costs.

(h) Out of any civil penalty collected for a violation of subsection (a) or (b) of this article, the board shall pay to the appropriate operator a sum sufficient in the judgment of the board to compensate the operator for any loss of revenue attributable to the violation. Such compensation may be subject to state and compact surcharges as if received in the normal course of the operator's business. The remainder of the civil penalty collected shall be allocated by the board. In

making such allocation, the board shall give first priority to the needs of the long-term care funds in the region.

(j) Any civil penalty collected for a violation of subsection (c) or (d) of this article shall be allocated by the board. In making such allocation, the board shall give first priority to the needs of the long-term care funds in the region.

(k) Violations of subsection (a), (b), (c), or (d) of this article may be enjoined by any court of general jurisdiction within the region where necessary jurisdiction is obtained in any appropriate proceeding commenced on behalf of the board by the attorney general of the party state wherein the proceeding is brought or by other counsel authorized by the board. In any such proceeding, the board, if it prevails, is entitled to recover reasonable attorney's fees as part of its costs.

(m) No state attorney general shall be required to bring any proceeding under any subsection of this article, except upon his consent.

ARTICLE VIII. ELIGIBILITY, ENTRY INTO EFFECT, CONGRESSIONAL CONSENT, WITHDRAWAL, EXCLUSION

(a) Arizona, Colorado, Nevada, New Mexico, Utah, and Wyoming are eligible to become parties to this compact. Any other state may be made eligible by unanimous consent of the board.

(b) An eligible state may become a party state by legislative enactment of this compact or by executive order of its governor adopting this compact; provided, however, a state becoming a party by executive order shall cease to be a party state upon adjournment of the first general session of its legislature convened thereafter, unless before such adjournment the legislature shall have enacted this compact.

(c) This compact shall take effect when it has been enacted by the legislatures of two (2) eligible states. However, subsections (b) and (c) of article VII shall not take effect until Congress has by law consented to this compact. Every five (5) years after such consent has been given, Congress may by law withdraw its consent.

(d) A state which has become a party state by legislative enactment may withdraw by legislation repealing its enactment of this compact; but no such repeal shall take effect until two (2) years after enactment of the repealing legislation. If the withdrawing state is a host state, any regional facility in that state shall remain available to receive low-level waste generated within the region until five (5) years after the effective date of the withdrawal; provided, however, this provision shall not apply to the existing facility in Beatty, Nevada.

(e) A party state may be excluded from this compact by a two-thirds (⅔) vote of the members representing the other

party states, acting in a meeting, on the ground that the state to be excluded has failed to carry out its obligation under this compact. Such an exclusion may be terminated upon a two-thirds (⅔) vote of the members acting in a meeting.

ARTICLE IX. CONSTRUCTION AND SEVERABILITY

(a) The provisions of this compact shall be broadly construed to carry out the purposes of the compact.

(b) Nothing in this compact shall be construed to affect any judicial proceeding pending on the effective date of this compact.

(c) If any part or application of this compact is held invalid, the remainder, or its application to other situations or persons, shall not be affected.

SEC. 2. The Congress hereby finds that the compact consented to in this Act is in furtherance of the policy set forth in section 4(a)(1) of the Low-Level Radioactive Waste Policy Act (42 U.S.C. 2021d(a)(1)). In order that such compact may be given full effect, the Nuclear Regulatory Commission shall consult and cooperate with the States that are parties to such compact in carrying out this subsection.

SEC. 3. Nothing contained in this Act or in the compact consented to in this Act may be construed as impairing or otherwise affecting in any manner any right or jurisdiction of the United States with respect to the region that is the subject of such compact.

SEC. 4. The right of the Congress to alter, amend, or repeal this Act is expressly reserved.

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